

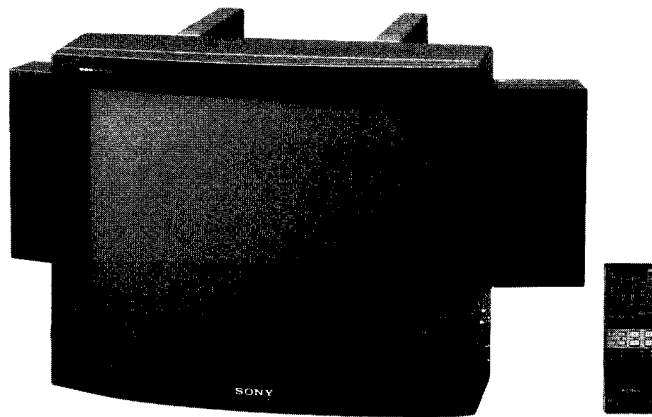
# KV-FX29TD

## RM-681/SS-XT291

# SERVICE MANUAL

*AEP Model*

*Chassis No. SCC-C16A-A*



# FX CHASSIS

**Note:** The service manual for RM-681 and SS-XT291 have been issued separately.

### MODELS OF THE SAME SERIES

KV-FX29TD	

### SPECIFICATIONS

**Television system**  
**Color system**  
**Channel coverage**

B/G/H, I, L  
PAL, SECAM, NTSC 4.43, NTSC 3.58  
See "Receivable channels and channel displays"

Italy PAL B/G	AEP PAL B/G	Cable TV (2)	French SECAM-L	PAL-I Ireland	PAL-I UK
A C13	E2 C02	S01 42	2 C02	A C01	21 C21
...	12 C12	S05 46	10 C10	...	...
...	21 C21	M1 01	21 C21	...	...
...	69 C69	M10 10	69 C69	...	...
H C20	Cable TV (1)	U1 11	French Cable TV	...	...
H1 C11	S1 01	...	B 02	H C08	...
H2 C12	41 41	U10 20	Q 17	J C09	69 C69

**Picture tube**

Trinitron tube  
Approx. 72.4cm (29 inches)  
Approx. 68cm picture measured diagonally  
110° degree deflection

**Input**

21-pin connector: CENELEC Standard including RGB input  
21-pin connector: S VIDEO  
Y: 1Vp-p 3dB 75  
C: 0.3Vp-p 3dB 75

— Continued on page 2 —



# TRINITRON® COLOR TV

# SONY®

## Outputs

Headphone jack : stereo minijack  
External speaker terminals : 2-pin DIN  
Audio output jacks : phono jack...Output level dependent upon TV settings

## Sound output

20W+20W (music power)

## Power consumption

180Wh

## Dimensions

Approx. 666×532×526.5mm (w/h/d)

## Weight

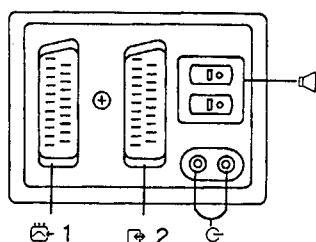
Approx. 52kg

## Supplied accessories

RM-681 Remmote Commmander (1)  
IEC designation R6 batteries (2)  
SS-XT291 Detachable Speakers (1 set)  
Speaker cord with plug (2)

Design and specifications are subject to change without notice.

## 21 Pin Connector (1 2)



Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
2	○	○	Audio input B (right)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
3	○	○	Audio output A (left)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5-12 V) : Part mode Low state (0-2 V) : TV mode Input impedance : More than 10kohms Input capacitance : Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal : 0.7V±3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	○	Red input	0.7V±3dB, 75ohms, positive
	○	○	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1-3 V) Low state (0-0.4 V) Input impedance : 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
20	○	○	Video input	1 V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
	○	○	Video input/Y (S signal)	1 V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected      ● unconnected (open)


\* at 20 Hz-20 kHz



## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>1. GENERAL</b>			<b>5. DIAGRAM</b>		
1-1.	Features	4	5-1.	Block Diagram	21
1-2.	Function of Controls	4	5-2.	Circuit Boards Location	26
1-3.	To Preset Channels	6	5-3.	Schematic Diagram (1)	27
1-4.	How to Select the Desired Channel	6	5-4.	Printed Wiring Boards (1)	28
1-5.	Connecting Other Equipment	7		Schematic Diagram (2)	31
1-6.	How to Attach the Speakers	7		Printed Wiring Board (2)	39
1-7.	Viewing Teletext	8		Schematic Diagram (3)	40
<b>2. DISASSEMBLY</b>				Printed Wiring Board (3)	41
2-1.	Rear Cover Removal	9		Schematic Diagram (4)	43
2-2.	Chassis Assy Removal	9		Printed Wiring Boards (4)	47
2-3.	G Board Removal and J1, A Boards Opening	9		Schematic Diagram (5)	49
2-4.	B1 Q and V Boards Removal	9		Printed Wiring Board (5)	51
2-5.	Picture Tube Removal	10		Schematic Diagram (6)	53
2-6.	Service Position	11		Printed Wiring Board (6)	53
<b>3. SET-UP ADJUSTMENTS</b>				Schematic Diagram (7)	54
3-1.	Beam Landing	12		Printed Wiring Board (7)	57
3-2.	Convergence	13		Schematic Diagram (8)	60
3-3.	Focus	15		Printed Wiring Boards (8)	61
3-4.	White Balance	16		Schematic Diagram (9)	63
<b>4. CIRCUIT ADJUSTMENTS</b>				Printed wiring Board (9)	65
4-1.	A Board Adjustments	17	5-5.	Semiconductors	66
4-2.	B Board Adjustments	17	<b>6. EXPLODED VIEWS</b>		
4-3.	B1 Board Adjustments	17	6-1.	Chassis	68
4-4.	D Board Adjustments	19	6-2.	Picture Tube	69
4-5.	Q Board Adjustment	19	<b>7. ELECTRICAL PARTS LIST</b>		70
4-6.	V Board Adjustments	19			
4-7.	Sub Adjustments	20			

## SAFETY-RELATED COMPONENT WARNING !!

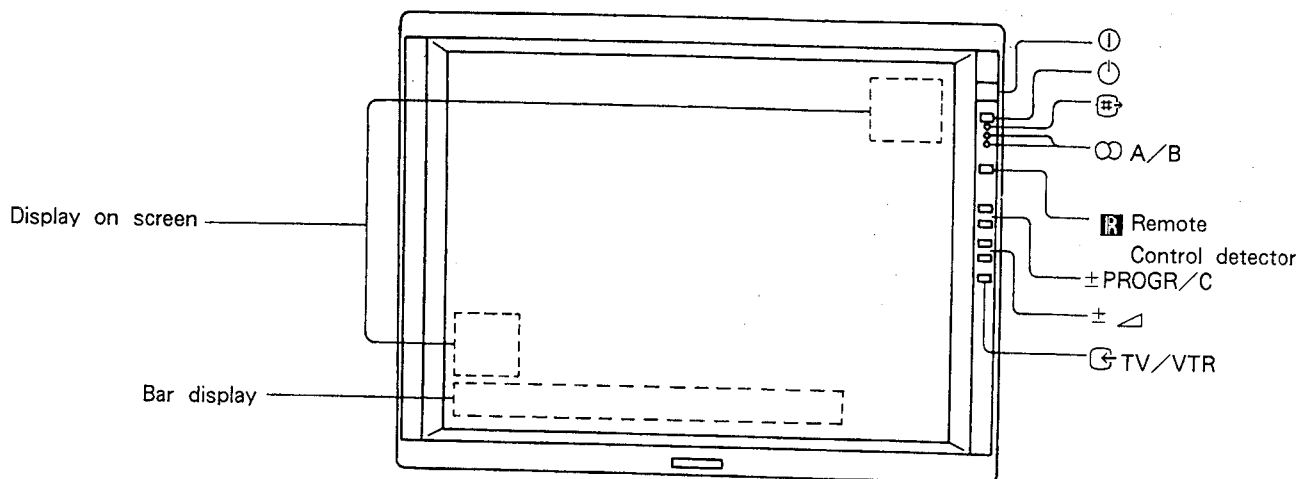
COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SECTION 1 GENERAL

### 1-1. FEATURES

- New Microblack Trinitron picture tube for a high resolution and high contrast picture.
- S VIDEO INPUT connector through which Y (luminance) and C (chrominance) signals can be input separately. This reduces interference between the signals and ensures excellent picture quality.
- Multi system PAL (B, G, H, I) SECAM (L) can be received. And NTSC4.43 and 3.58 with video input can be also received.
- Flicker free function produces clear picture.
- Noise Reduction function
- Frequency synthesiser tuning system
- Detachable speakers
- 21-pin connectors allow direct hook-up to up to two VCRs and/or other equipment.
- Teletext adaptor is built-in.

### 1-2. FUNCTION OF CONTROLS



#### On the set

##### On-screen display

Indicates program numbers, input modes; ①, ⏻, ② and ⏻ and picture and sound adjustment items. Press ⏻ on the Remote Commander to display them on the screen.

##### Bar display

Indicates the level of the user controls when they are adjusted.

##### ① Power switch

To cut off the mains electricity supply, press this switch. Ensure correct operation by pressing this switch fully.

##### ⏻ standby indicator

##### Noise reduction indicator

##### Stereo A/B indicator

##### R Remote control detector

Point the Remote Commander towards this detector.

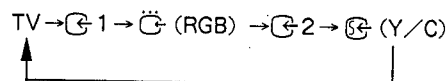
##### PROGR +/— buttons

Use to scan the available channels. And to return to TV mode from standby mode when Remote Commander is not available.

##### Volume +/— buttons

#### TV/VIDEO button

Press to select the TV or one of the other input modes.



- ① Video signal through ① (21-pin connector) can be seen on the screen.
- ⏻ RGB signal through ① (21-pin connector) can be seen on the screen. Sharpness is fixed in this case.
- ② Video signal through ② (21-pin connector) can be seen on the screen.
- ⏻ S video signal through ② (21-pin connector) can be seen on the screen. When you see S video, make sure that the set is in the S video mode.

#### S video input

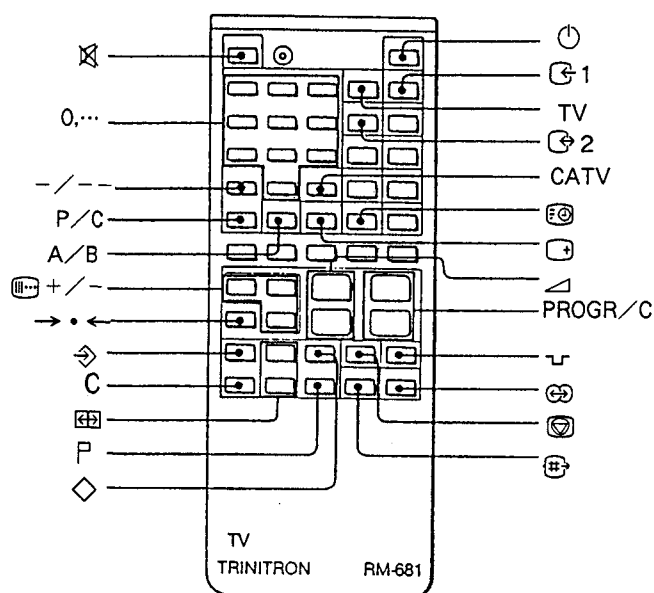
Video signals may be separated into Y (luminance) and C (chrominance) signals.

Usually these two signals are combined in a VTR and output as one signal, and supplied to a TV. Separation of the Y and C signals prevent them from interfering with one another, thereby improving picture quality. This set is equipped with an S video input jack through which these separated signals can be input directly.

Connect the S video output jack on the VTR to the S video input on this set.

#### Headphones jack (stereo minijack)

(KV-FX29TA, FX29TD RM-681)



#### On the Remote Commander

##### mute button

Use to mute the sound.

##### 0,..., 9, buttons

Use to select a program number.

##### -/- button

Use to select a program number over 9.  
To select 23, press , then 2 and 3.

##### CATV button

Use to select CATV channels.

##### P/C (program/channel) button

Use to select the channel mode or to return to the program mode.

##### A/B bilingual button

Press to select channel A (usually the local language) or B (usually the original language) of a bilingual program. Both indicators light up if a stereo program is received.

##### On-screen display button

Press to make the display appear on the screen. And again to make it disappear.

##### standby button

Press to turn the set into the standby mode. Use this facility to turn off the set for short periods of time. To return to TV mode, press TV or the program number on the Remote Commander; there will be a slight delay before the picture is restored.

##### TV button

Press to change to TV mode from standby, video input or teletext modes.

##### 1 input button

Press to view the input picture coming in through the 1 connector.

Each time this button is pressed, 1 and (RGB) will appear alternately.

Press TV or the program number to return to the TV mode.

##### 2 input button

Press to view the input picture coming in through the 2 connector. 2 and (Y/C) will appear alternately.

Press TV or the program number to return to the TV mode.

#### Time button

In TV mode, press to display the preset time on the screen, and again to make it disappear. This function is available only when the teletext service is broadcast in the selected channel.

+/-, picture and sound adjustment buttons.

There are two ways to use these buttons.

#### 1. When watching a TV program

Press repeatedly until the on-screen display of the required item appears, i. e. picture, color, brightness, hue, sharpness, bass, treble or balance.

Adjust by pressing + or -.

#### 2. When presetting TV channels and programs

For details please see "To preset channels".

##### reset button

Press to reset the user controls to the factory-set levels.

##### Preset button

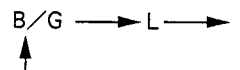
Used when presetting channels.

##### clear button

Used when presetting a program to be skipped.

##### TV system switch button

Press to select the TV system.



##### store button

Used when presetting channels.

##### Volume +/- buttons

##### PROGR/C +/- buttons

Used to scan the available programs or channels.


##### space sound button

Press to obtain special acoustic effects. Press again to restore normal sound. (The indicator on the screen is )

##### noise reduction button

Press to reduce noise on the picture. The indicator on the set lights up.

**loudness button**

Press to emphasize high and low tones. Press again to restore the normal sound. (The indicator on the screen is )


**freeze button**

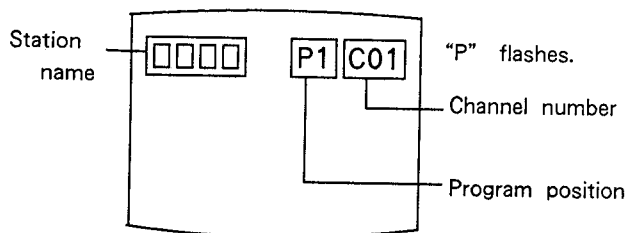
Press to view a still picture. Press again to restore normal picture.


**Note** Buttons not referred to in this manual do not operate.

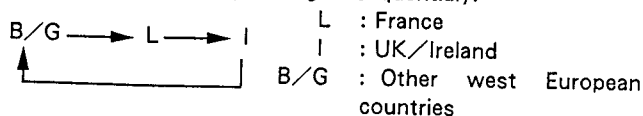
### 1-3. TO PRESET CHANNELS


Use the buttons on the Remote Commander.

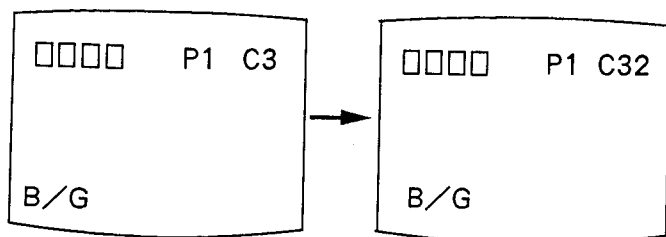
1. Press  (preset).
2. Press a number button on the Remote Commander to select a desired program position.








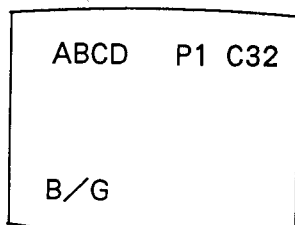
3. Press  to select the appropriate TV system. TV system display changes sequentially.






4. Press . C starts flashing, then press the desired channel number e. g. To tune in channel number 32, press 3 and then 2. (To tune in channel number 4, press 0 and then 4.) The display will be as follows.




If you want to name the station, Press . The first column of the station name flashes. Press  +  to select a desired character. Press  again to make the second column flash, and select a desired character. Thus four characters can be displayed as desired. To make the column blank, leave .






When the last column flashes, press . P starts flashing.

To tune in a higher or lower station, press  + . Channel searching starts. Channel number increases or decreases until a TV station is tuned in.

5. Press  to memorize all the station data displayed on the screen. Then P starts blinking. If you want to preset more channels, repeat steps 2 to 5.

6. Press .

To skip a position, press  and  in the preset mode. The position is skipped when program +  - button is pressed.



To return to TV mode, press .



### 1-4. HOW TO SELECT THE DESIRED CHANNEL

There are two ways to select a channel.


#### To select by appointing a program number

For direct program tuning for the programs under 10, press 0, 1, 2, 3,...9.

For direct program tuning for the program over 9, press  and two number buttons. (e. g.  3 and then 2)

For sequential program up/down tuning, press  + .



#### To select by appointing a channel position

Press  to change into the channel tuning mode. "C" appears on the screen.

For direct channel tuning for the normal channel, press two number buttons sequentially. (e. g. for channel 2, press 0 and 2)

#### Note

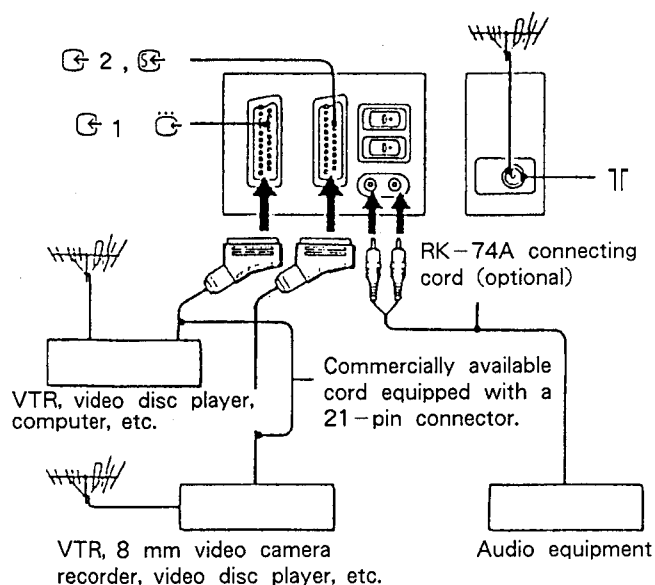
When pressing two number buttons, the second button should be pressed within 5 seconds. otherwise the operation will be cancelled and display will return to the original one.

For sequential channel up/down tuning, press  + .

## 1-5. CONNECTING OTHER EQUIPMENT

There are two ways to connect a Video Tape Recorder (VTR).

Connectors on the rear of the set



\*Connect S VIDEO output of the VTR, etc. here.

### Notes

- Move the VTR away from the TV if the picture or the sound is distorted.
- Only one of the VTRs should be turned on at one time.
- It is also possible to connect a VTR using the  $\Pi$  socket.
- Computers cannot be connected to 2.

### S video input

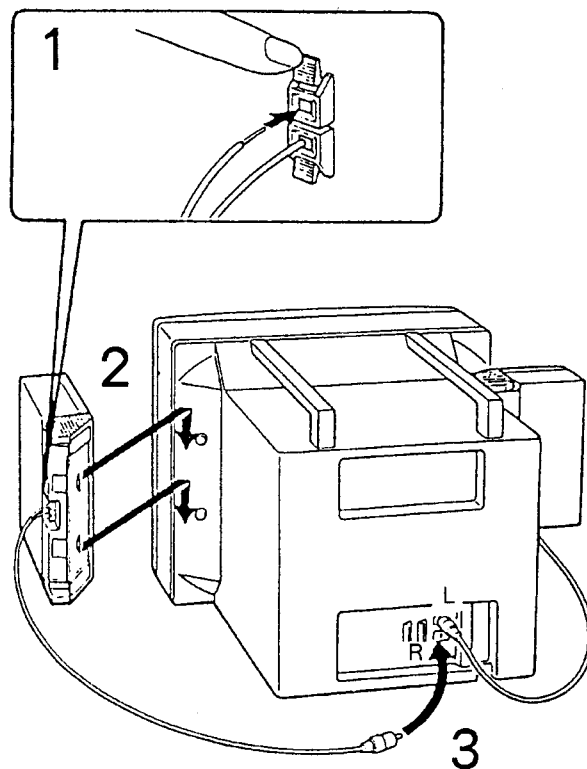
Video signals may be separated into Y (luminance) and C (chrominance) signals. Usually these two signals are combined in a VTR and output as one signal, and supplied to a TV. Separation of the Y and C signals prevent them from interfering with one another, thereby improving picture quality.

This set is equipped with an S video input jack through which these separated signals can be input directly.

Connect the S video output jack on the VTR to the S video input on this set.

## 1-6. HOW TO ATTACH THE SPEAKERS

1. Connect the black cord to the black button on the speaker.  
Connect the white cord to the red button hole.
2. Attach the right and left speakers to the set.
3. Connect the left speaker cord to  $\square$  L/G/S terminal and the right speaker cord to  $\square$  R/D/D terminal on the rear of the set.



## 1-7. VIEWING TELETEXT

To view the teletext service, use the Remote Commander. The buttons for teletext operation are indicated in green.

### Operation

1. Select the TV channel for the desired teletext service.  
When the signal is weak, teletext errors may often occur.
2. Press (TEXT/MIX) to display the teletext service.
3. Key in the three digits of the desired page using the number buttons. If an error is made, complete the three-digit sequence by keying in any digit. Then re-enter the correct page number. The requested teletext page is displayed.

To return to the TV mode, press TV on the Remote Commander.

The teletext service can be displayed directly from the standby mode by pressing .

To receive the teletext service of a different TV channel.

1. Press TV to return to the TV mode.
2. Select the desired TV channel.
3. Press .

### To request the index page

Press (INDEX). If the necessary signal is not being broadcast, page 100 is displayed.

### To access the next or preceding page.

Press (PAGE+) or (PAGE-).

### To superimpose the teletext display on the picture

Press twice from TV mode.

Press again to return to the TEXT display.

### To suppress the teletext display so that the TV picture is displayed.

Press (TEXT CL). This button can be operated from both the TEXT and MIX displays.

### To prevent a teletext page from being updated/changed.

Press (HOLD). The HOLD symbol appears on the screen.

To resume normal teletext reception, press .

### To enlarge the teletext display

Press once to enlarge the upper half of the display; press again to enlarge the lower half of the display. And press again to return to the normal display.

### To reveal concealed information such as answers to a quiz

Press (REVEAL).

Press again to conceal the answers.

To watch the TV program while waiting for a requested page to be displayed

1. Request the new page.
2. Press to watch the TV program. The requested page number and other data appears at the top of the screen while the page number is being searched for. When the requested page has been captured, the page number on the screen and the other data disappears.

**P101**

(TV picture)

To have a requested page displayed at a pre-determined time

1. Request a time coded page (e. g. alarm page).

2. Press (TP ON).

"T\*\*\*\*" will appear at the bottom of the screen.

**T\*\*\*\***

3. Enter your request time with the number buttons, using four digits.  
For example, 0730.

**T0730**

To watch the TV program until the requested time, press .

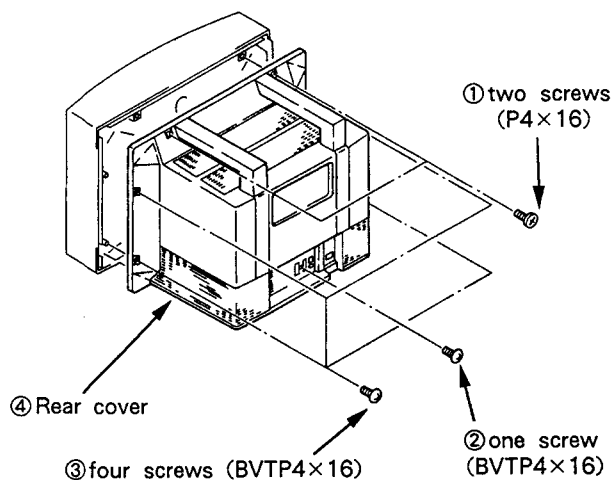
At the requested time, the page number will be displayed at the bottom of the screen.

To view this page, press .

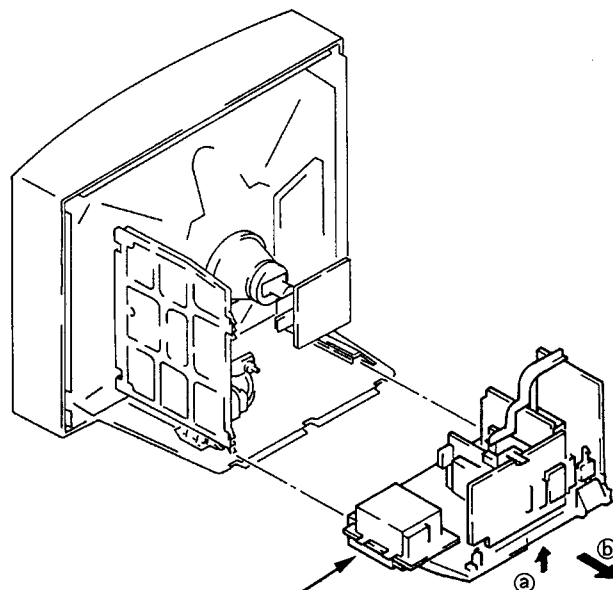
To cancel the request, first ensure that the teletext page is displayed, then press (TP OFF).

## SECTION 2 DISASSEMBLY

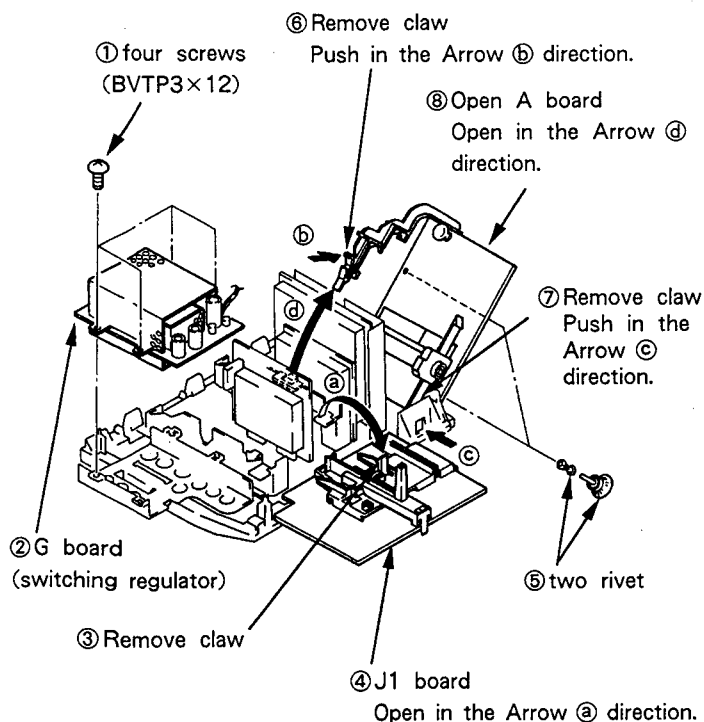
### 2-1. REAR COVER REMOVAL



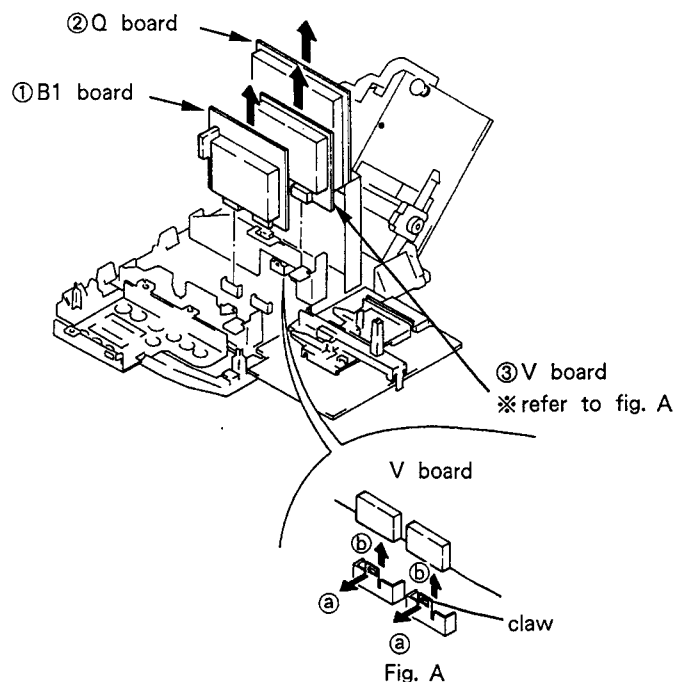
### 2-2. CHASSIS ASSY REMOVAL



### 2-3. G BOARD (SWITCHING REGULATOR) REMOVAL AND J1, A BOARDS OPENING

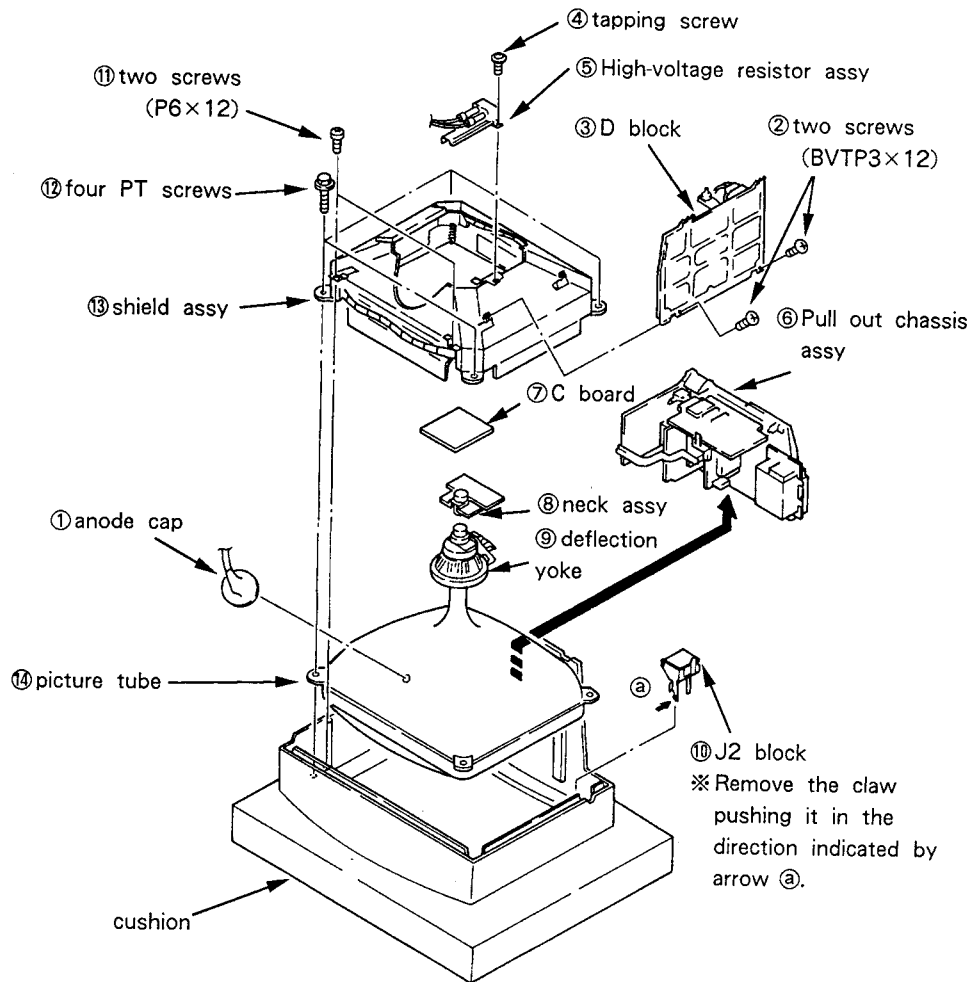


### 2-4. B1, Q AND V BOARDS REMOVAL

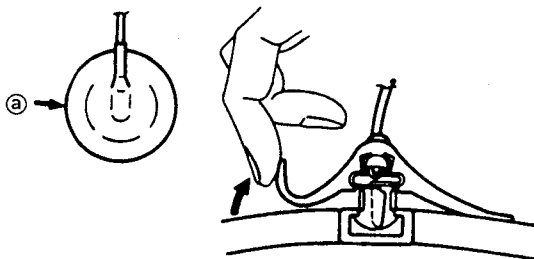


④ Pull out V board after removing the two claws on the connector holding V board in place in the direction indicated by arrow ④.  
※ The operation must be performed after removal of board B1.

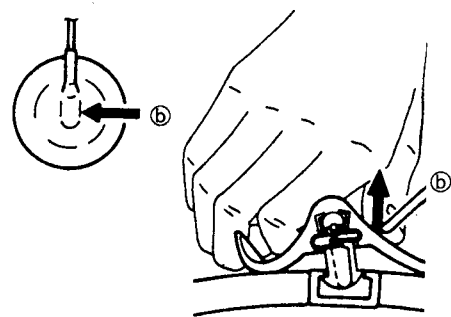
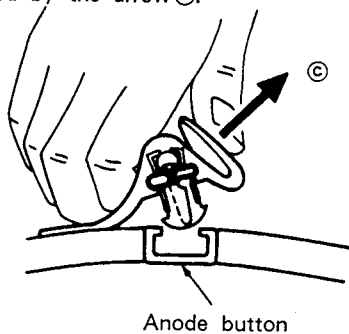
## 2-5. PICTURE TUBE REMOVAL



### ● Removing Procedures



① Turn up one side of the rubber cap in the direction indicated by the arrow a.

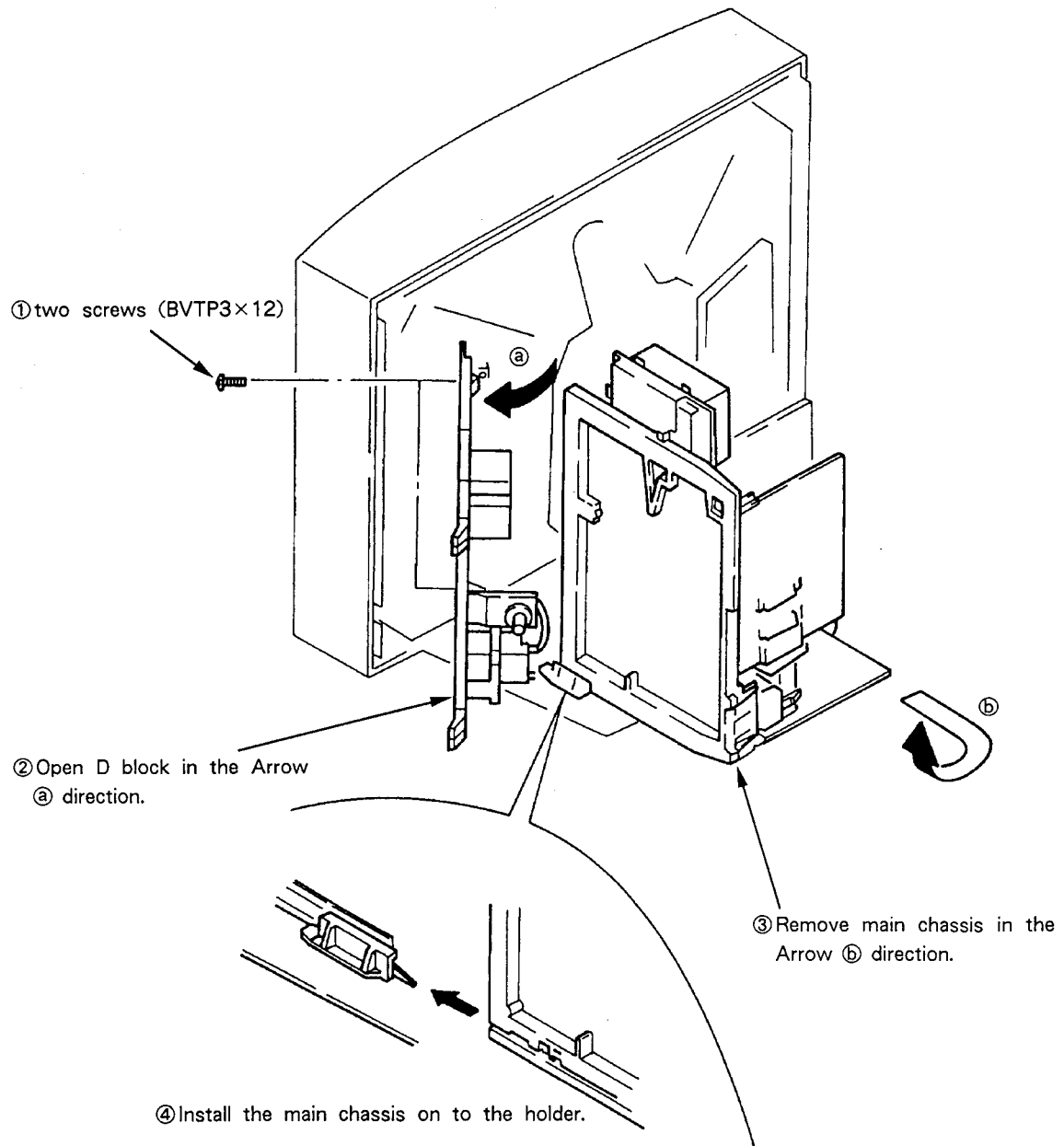


② Using a thumb, pull up the rubber cap firmly in the direction indicated by the arrow b.

③ When one side of the rubber cap is separated from the anode button, the anode cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow c.



**2-6. SERVICE POSITION**



## SECTION 3 SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The control and switch below should be set as follows unless otherwise noted :

⊙ CONTRAST control ..... 80% (or Normal by Commander)

✱ BRIGHTNESS control .... 50%

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

**Note :** Test Equipment Required.

1. Color Bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

### Preparation

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

### 3-1. BEAM LANDING

1. Input a raster signal with the pattern generator.  
CONTRAST } normal  
BRIGHTNESS }
2. Turn the raster signal of the pattern generator to red.
3. Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides, evenly. (Fig. 3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes red. (Fig. 3-1)
5. Switch over the raster signal to blue and green and confirm the condition.
6. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.
7. When landing at the corners is not right, adjust by using the magnet. (Fig. 3-4)

Fig. 3-2

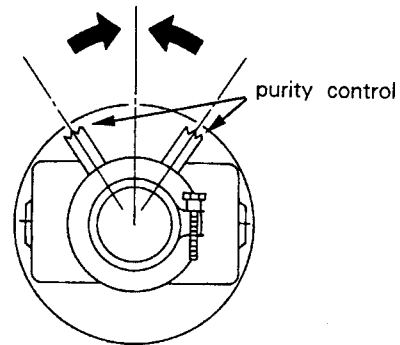


Fig.3-3

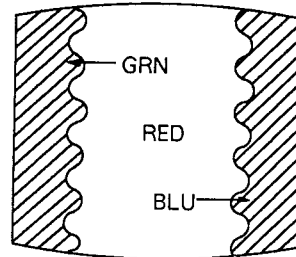


Fig.3-4

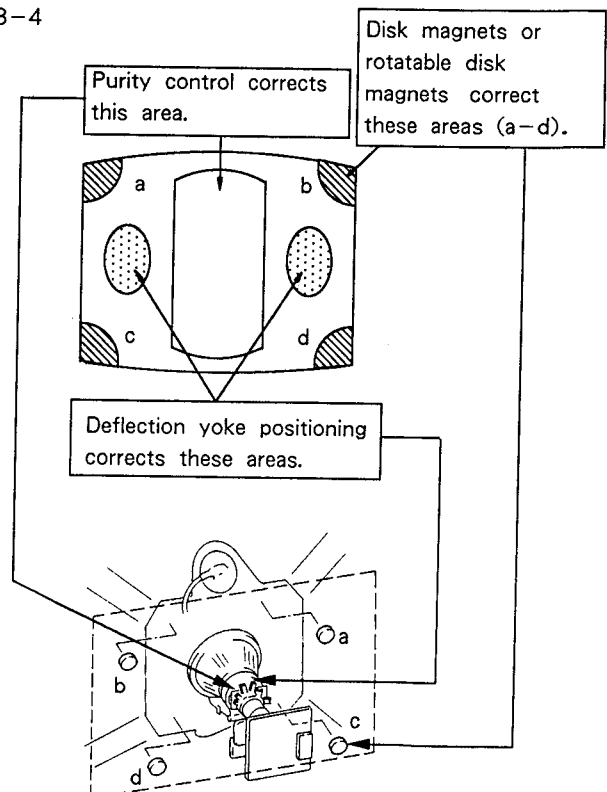
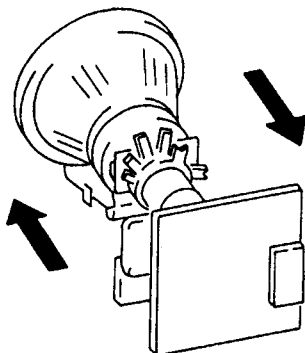


Fig.3-1

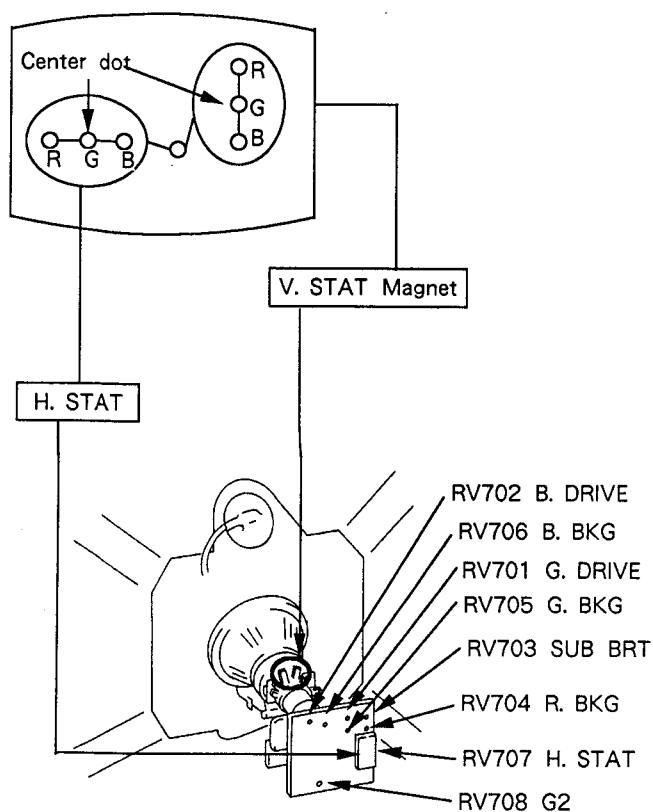


### 3-2. CONVERGENCE

#### Preparation :

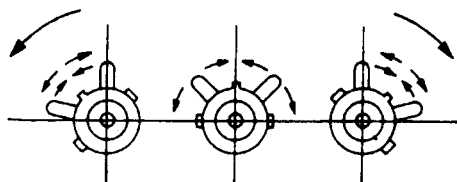
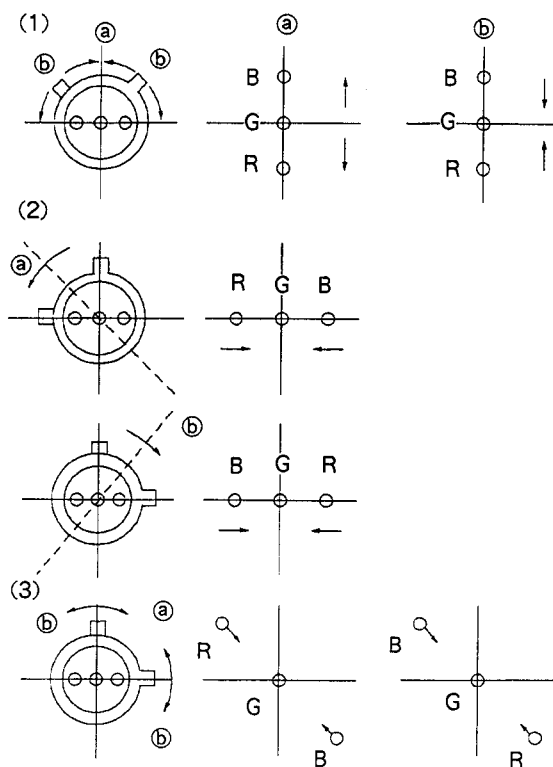
- Before starting, perform FOCUS, H. SIZE and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.

#### (1) Horizontal and Vertical Static Convergence

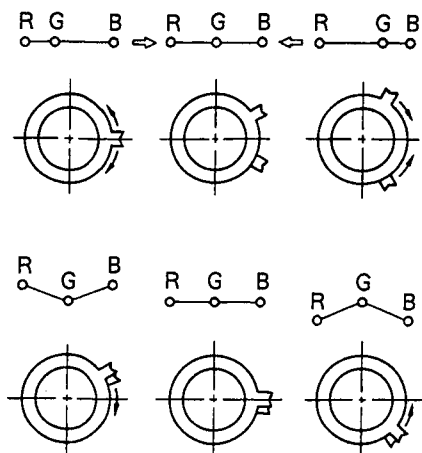


1. Adjust H. STAT VR to coincide red, green and blue dots on the center of screen, (Horizontal movement)
  2. Adjust V. STAT magnet to coincide red, green and blue dots on the center of screen, (Vertical movement)
  3. If the red, green and blue dots do not coincide on the center of screen with H. STAT VR, perform horizontal convergence adjustment using H. STAT VR and V. STAT magnet as shown below. (In this case, H. STAT VR and V. STAT magnet effect each other.)
- Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.

4. When the V. STAT magnet is moved in the direction of arrow ③ and ④, red, green and blue dots move as shown below.

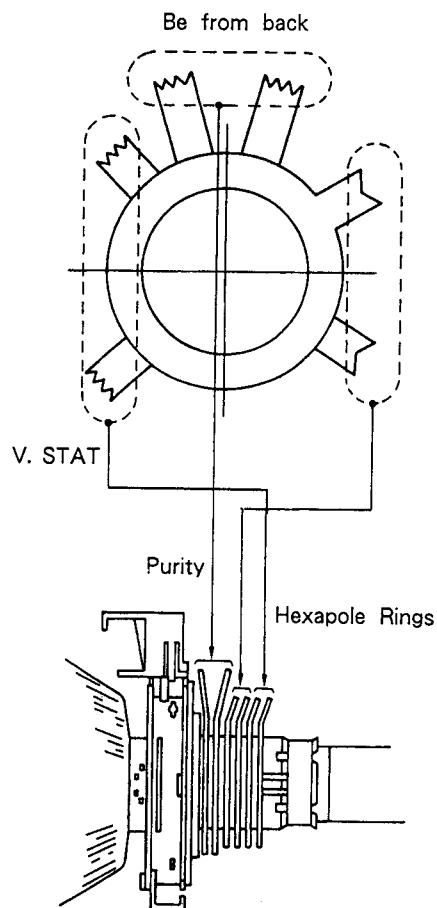


● Operation of Hexapole Ringed Magnet



The respective dot operations resulting from the operation of each magnet are not completely independent, so be sure to perform adjustment while tracking.

Use the H, STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



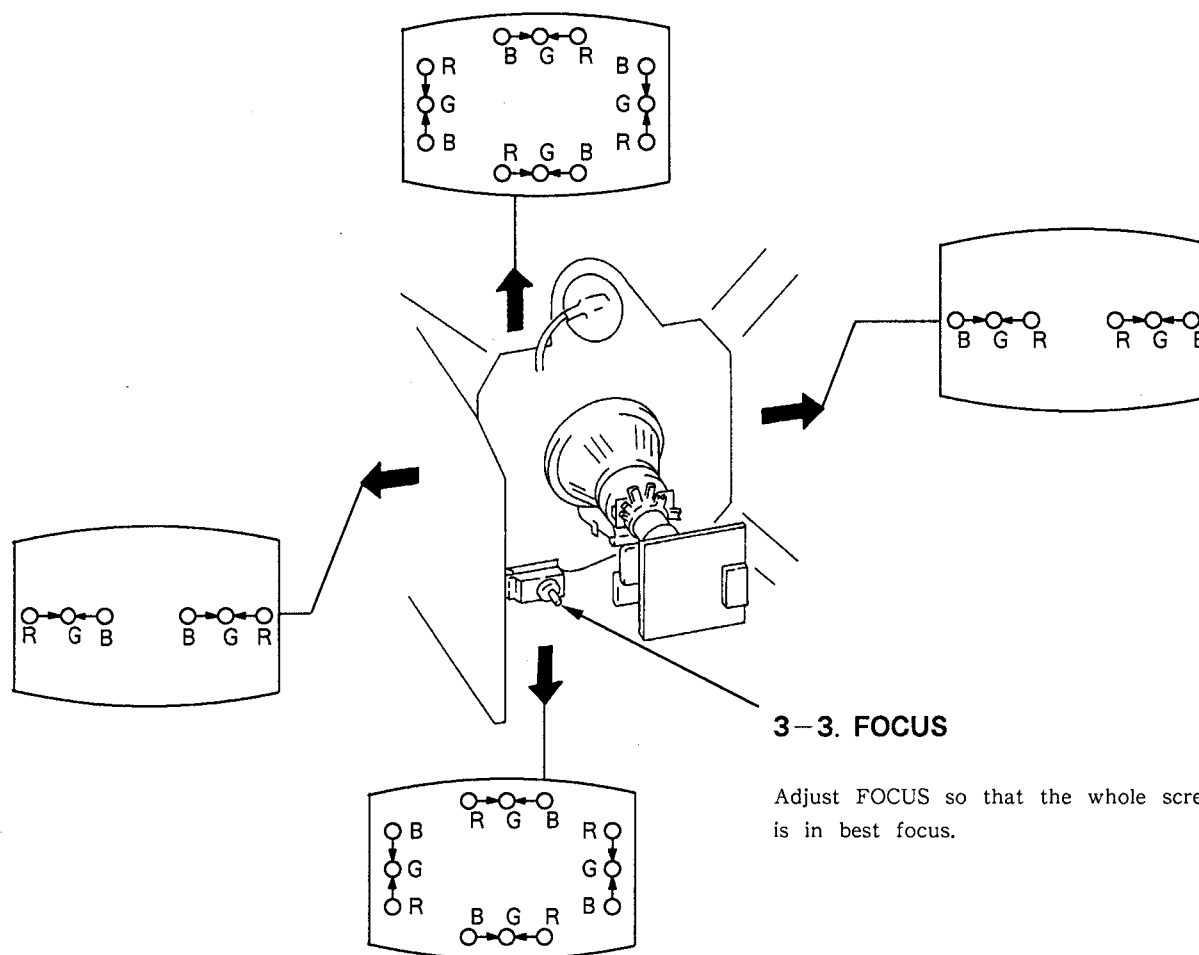
## (2) Dynamic Convergence Adjustment

### Preparation :

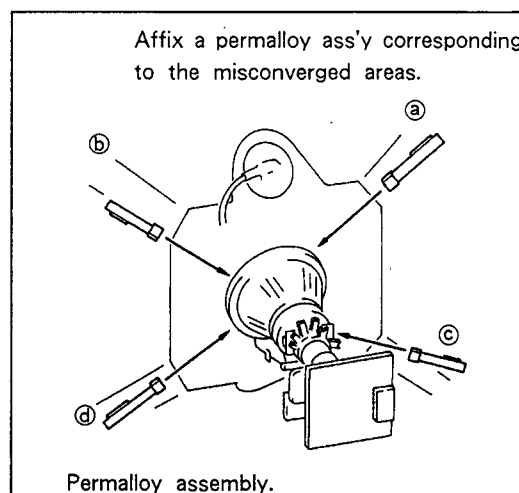
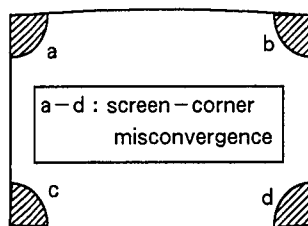
- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.

3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



## (3) Screen - corner Convergence



### **3-4. WHITE BALANCE**

[Screen (G2) Setting]

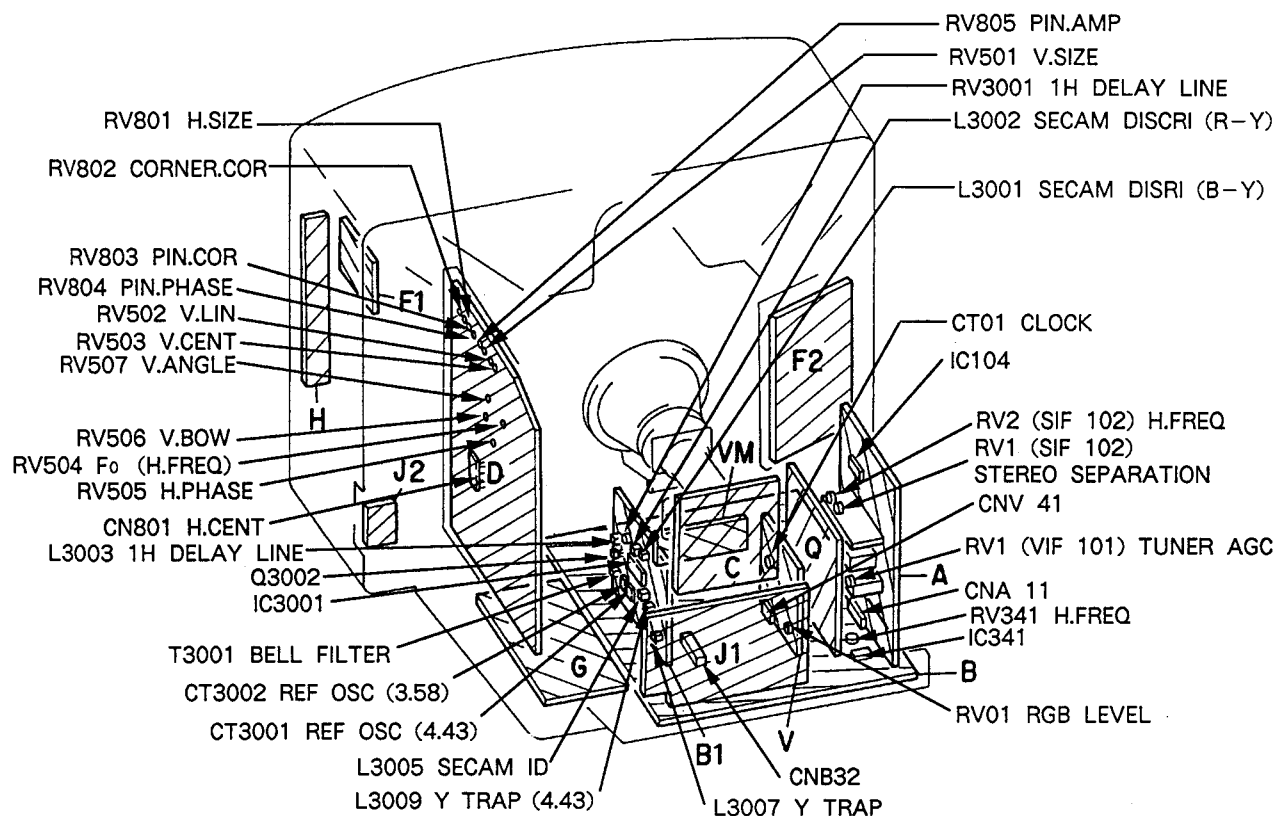
1. Input dot signals.
2. Set the picture BRIGHTNESS control to the minimum level.
3. Apply 170 V dc to the cathodes of R, G, and B from an external power source.
4. While watching the picture, adjust the G2 volume (RV708) immediately before the fly-back line disappears.

[White Balance Adjustment]

1. Input all-white signals.
2. Adjust the BRIGHTNESS and COLOR controls to the standard level.
3. Adjust the highlight W/B balance by turning the RV702 (B. DRIVE) and RV701 (G DRIVE). Also, adjust the cut-off W/B by turning RV706 (B-BKG), RV705 (G-BKG) and RV704 (R-BKG). Note that these two balances must be adjusted during tracking.

In the following adjustments, the CONTRAST, COLOR and BRIGHTNESS controls are set to normal unless otherwise specified.

## SECTION 4 CIRCUIT ADJUSTMENTS



### 4-1. A BOARD ADJUSTMENTS

#### TUNER AGC Adjustment VIF101 (IFG389FS) RV1

1. Tune in an off-air signal.
2. Adjust RV1 so that snow-noise and cross-modulation just disappear from the picture.

#### STEREO SEPARATION Adjustment SIF102 (IFG5,5S) RV1

1. Input stereo signal (L-CH 1kHz, R-CH 400Hz)
2. Check the stereo indicator.
3. Connect an oscilloscope to the pin ① (L) of CNA11 through band pass filter of 1kHz.
4. Adjust RV1 so that 1kHz voltage goes down to the minimum.

#### H. FREQ. Adjustment SIF102 (IFG5,5S) RV2

1. Input PAL COLOR pattern.
2. Short circuit between pin ⑫ of IC4 (TDA2595) and ground.
3. Connect a frequency counter to the pin ⑥ through a probe of 10:1.
4. Adjust RV2 so that H. frequency becomes  $15,625 \pm 50\text{Hz}$ .

### 4-2. B BOARD ADJUSTMENTS

#### H. FREQ Adjustment (RV341)

1. Input a PAL COLOR BAR pattern.
2. Connect pin ⑫ of IC341 to the ground.
3. Connect the frequency counter to pin ⑥ using the 10:1 ratio probe.
4. Adjust RV341 so that frequency H becomes  $15,625 \pm 50\text{Hz}$ .

### 4-3. B1 BOARD ADJUSTMENTS

#### REF OSC Adjustment (CT3001, 4.43 MHz)

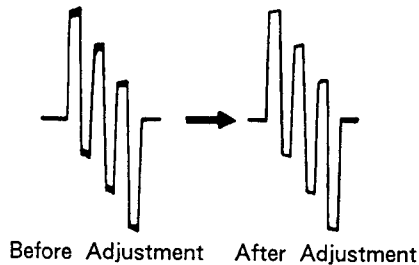
1. Input a PAL COLOR BAR pattern.
2. Short circuit between pin ⑪ of IC3001 and ground.
3. Adjust CT3001 to obtain color synchronization.
4. Remove the jumper wire from IC3001.

#### REF OSC Adjustment (CT3002, 3.58 MHz)

1. Input NTSC 3.58 COLOR BAR signal.
2. Short-circuit pin ⑪ of IC3001 and the ground.
3. Adjust CT3002 to obtain color synchronization.
4. Remove the jumper of IC3001.

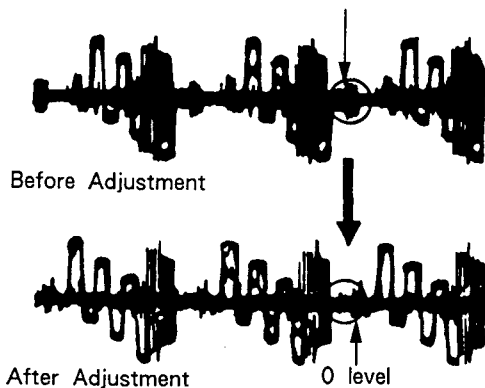
**1H DELAY LINE Adjustment (L3003, RV3001)**

1. Input a PAL COLOR BAR pattern.
2. Connect the oscilloscope to pin ③ (B-Y) of IC3001 and observe the waveform of the H block on the oscilloscope.
3. Adjust L3003 to minimize the double waveform outline.



4. Input a PAL TEST COLOR BAR pattern.
5. Rotate the RV3001 and adjust till the ANT PAL part of the waveform matches the 0 level.

This part matches the 0 level.



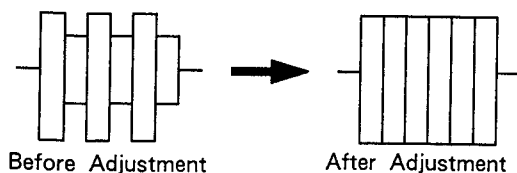
6. L3003 and RV3001 affect each other, so repeat till the conditions of both are met.

**SECAM ID Adjustment (L3005)**

1. Input SECAM COLOR BAR signal.
2. Connect a Digital Multi - meter at pin ② of IC3001.
3. Adjust L3005 so that the indicator goes up to the maximum.

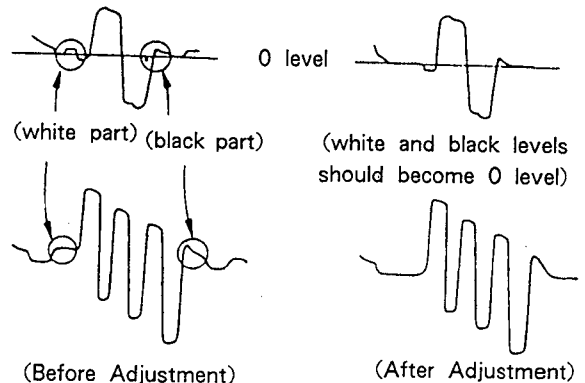
**BELL FILTER Adjustment (T3001)**

1. Input SECAM COLOR BAR pattern.
2. Connect an oscilloscope to the Q3002 emitter.
3. Adjust T3001 so that the waveform becomes flat.



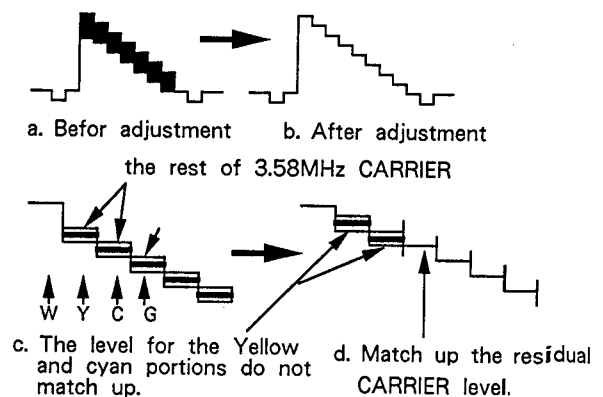
**SECAM DISCRI Adjustment [L3002 (R-Y), L3001 (B-Y)]**

1. Input SECAM COLOR BAR pattern.
2. Connect an oscilloscope at pin ① of IC3001.
3. Adjust L3002 (R-Y) so that white and black part of the waveform of pin ① becomes 0 level.
4. Connect an oscilloscope at pin ③ of IC3001.
5. Adjust L3001 (B-Y) so that white and black part of the waveform of pin ③ becomes 0 level.



**Y TRAP (L3007 4.25 MHz, L3009 4.43 MHz)**

1. Input PAL COLOR BAR pattern.
2. Connect the oscilloscope to the Y-OUT terminal of CNB32 pin ③ to display the waveform for the H portion.
3. Adjust L3009 to minimize the CARRIER level.
4. Convert the input signal into NTSC COLOR BAR pattern.
5. Cancel the forced PAL MODE and set the forced NTSC MODE.
6. Adjust L3007 while observing if the signal portions for the CARRIER level for DR (3.58 MHz).





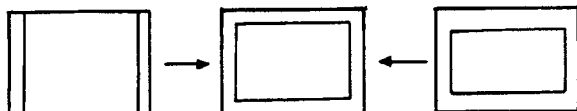
## 4-4. D BOARD ADJUSTMENTS

## H. FREQ Adjustment (RV504)

1. Input PAL COLOR BAR.
2. Connect 100/16 chemical condenser between pin ① of IC501 and the GND.
3. Connect the frequency counter probe to C824.
4. Adjust RV504 so that  $\pm 31.25$  Hz is obtained for 2H the frequency.

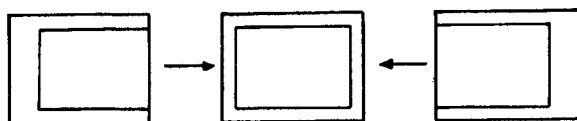
## RV501

## V. SIZE (VERTICAL SIZE)



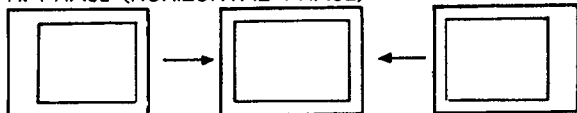
## CN801

## H. CENT (HORIZONTAL CENTER)



## RV505

## H. PHASE (HORIZONTAL PHASE)



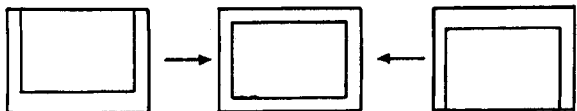
## RV801

## H. SIZE (HORIZONTAL SIZE)



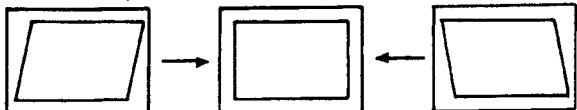
## RV503

## V. CENT (VERTICAL CENTER)



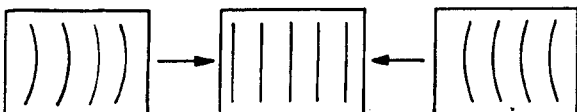
## RV507

## V. ANGLE (VERTICAL ANGLE)



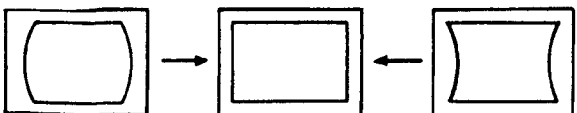
## RV506

## V. BOW (VERTICAL BOW)



## RV805

## PIN AMP (PINCUSHION AMPLIFIER)



## RV804

## PIN PHASE (PINCUSHION PHASE)



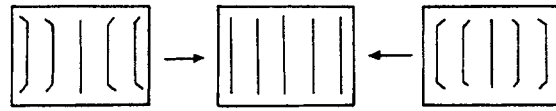
## RV803

## PIN COR (PINCUSHION CORRECT)



## RV802

## CORNER COR (CORNER CORRECT)



## RV502

## V. LIN (VERTICAL LINEARITY)



## 4-5. Q BOARD ADJUSTMENT

## H. FREQ Adjustment

1. Input PAL COLOR BAR pattern.
2. Connect pin ⑭ of CNQ44 (H SYNC) to the GND.
3. Turn the core of L1312 to adjust the position where the screen flows slowly.



## 4-6. V BOARD ADJUSTMENTS

## Clock Adjustment (CT01)

1. Disconnect the pins ② and ③ of CNV01.
2. Set up the TELE TEXT mode.
3. Adjust CT01 to stop pictures from scrolling.

## RGB Level Adjustment (RV01)

1. Set PICTURE to maximum.
2. Adjust RV01 till the RGB output becomes maximum.

#### 4-7. SUB ADJUSTMENTS

##### SUB BRIGHTNESS Adjustment

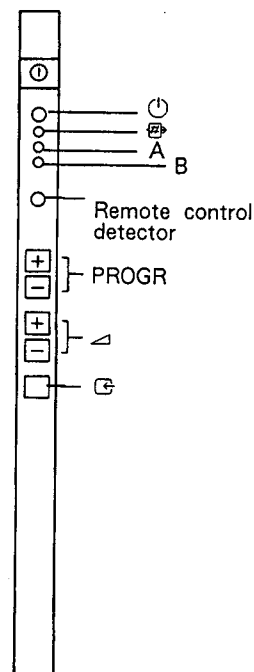
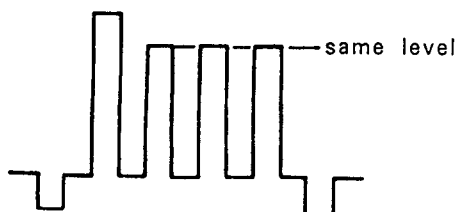
1. Receive and display a TEST COLOR BAR pattern.
2. Push → • ← on the remote commander to invoke the normal state.
3. Reduce the ● CONTRAST to the minimum level.
4. Adjust the SUB BRIGHTNESS RV703 until the 0 IRE of the gray scale becomes completely cut off, and the 20 IRE becomes barely luminous.

Where no TEST COLOR BAR pattern is available.

1. Display a COLOR BAR pattern.
2. Push → • ← on the remote commander to invoke the normal state.
3. Set the PICTURE and COLOR to minimum.
4. 20 IRE is close to blue, so adjust the SUB BRIGHTNESS RV703 till blue is faintly luminous.

##### SUB COLOR Adjustment

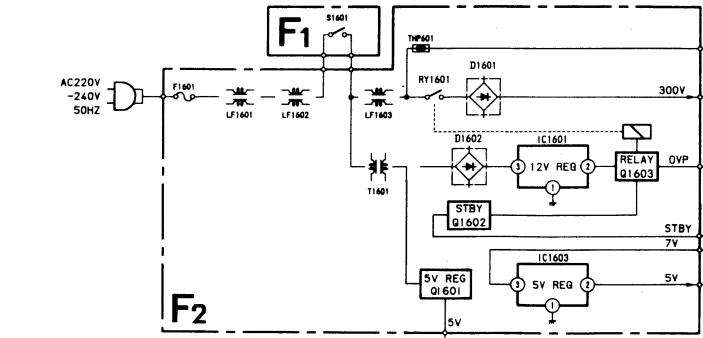
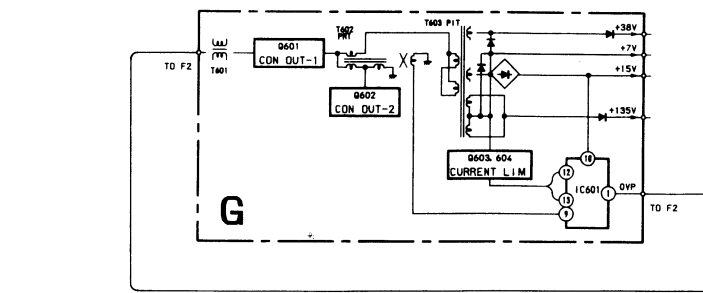
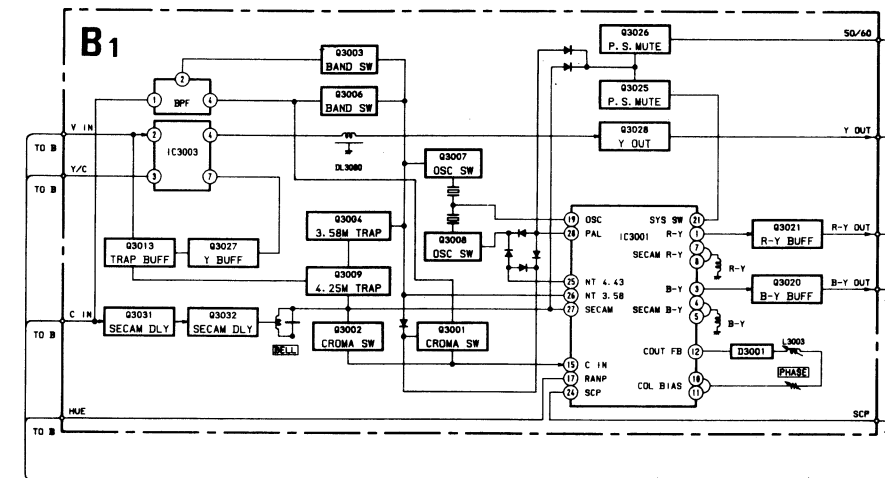
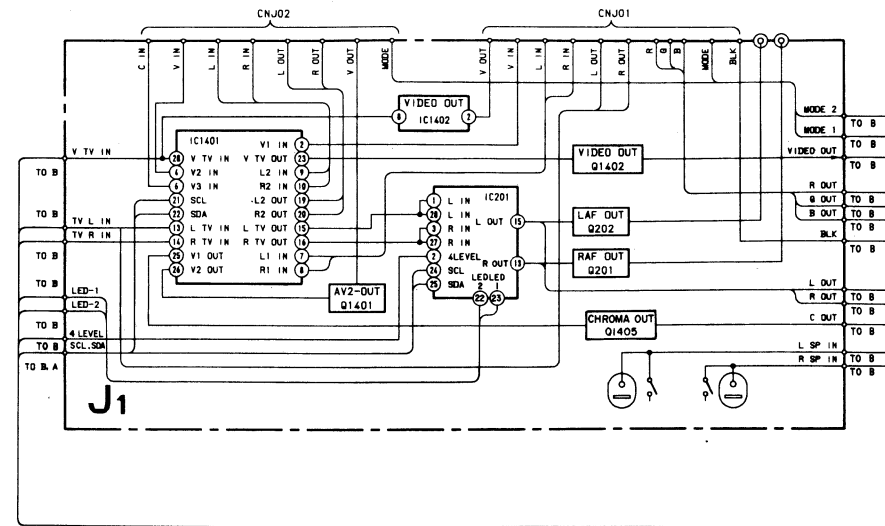
1. Display a COLOR BAR pattern.
2. Push → • ← on the remote commander to invoke the normal state.
3. Turn off the power supply.
4. Turn on the power supply while pushing the VOL + and VOL - buttons on the unit.
5. Adjust the COLOR control until the B out (pin ④ of CNC33 connector on C board) waveform becomes as shown below.



6. Push the STORE button on the remote commander. (SUB mode is cleared.)
- \* When Step 4 is executed correctly, SUB (SUB mode) is displayed at the upper right of the display. As S (SUB mode) is displayed only for 30 seconds, perform the adjustment within 30 seconds, or repeat from Step 4.

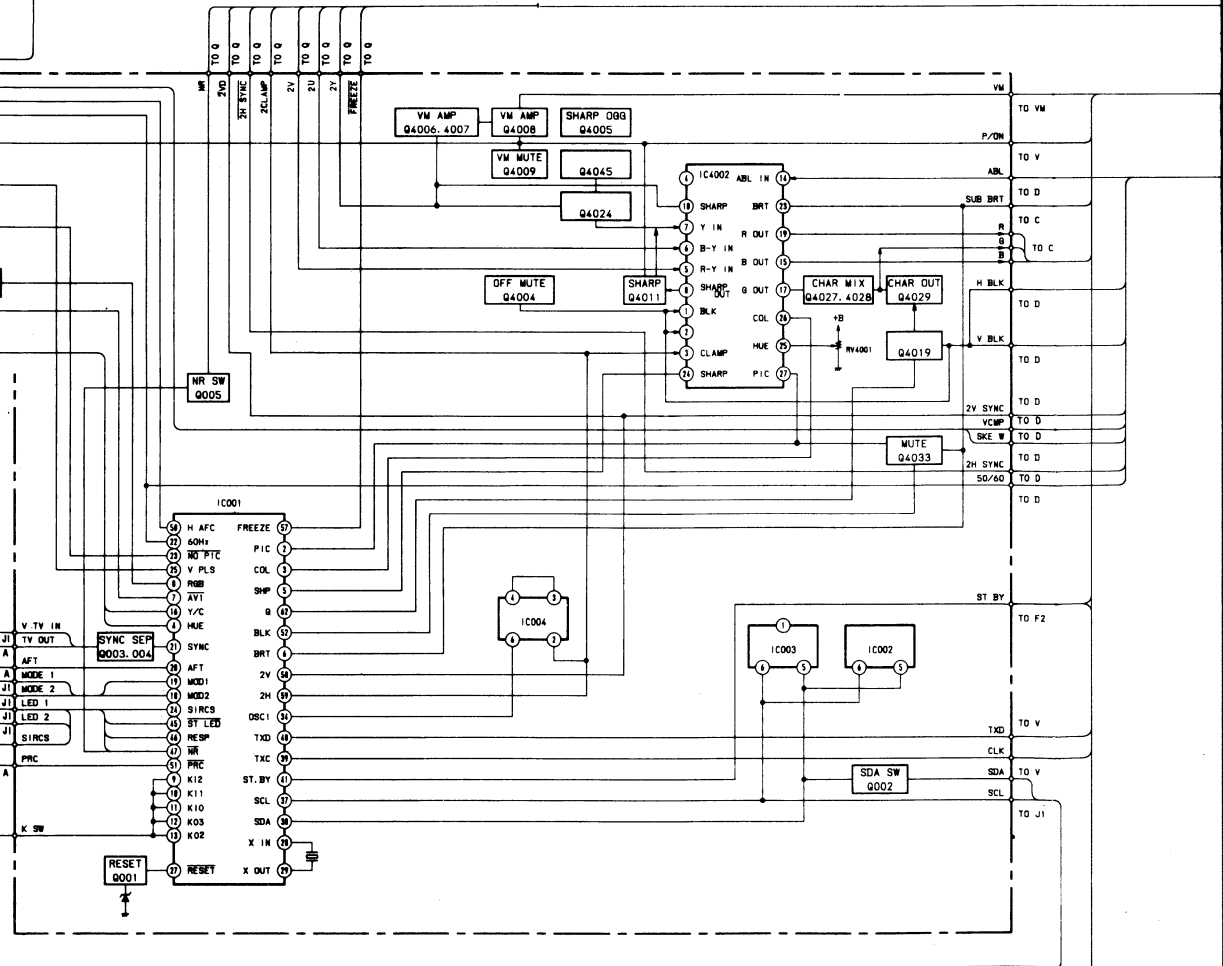
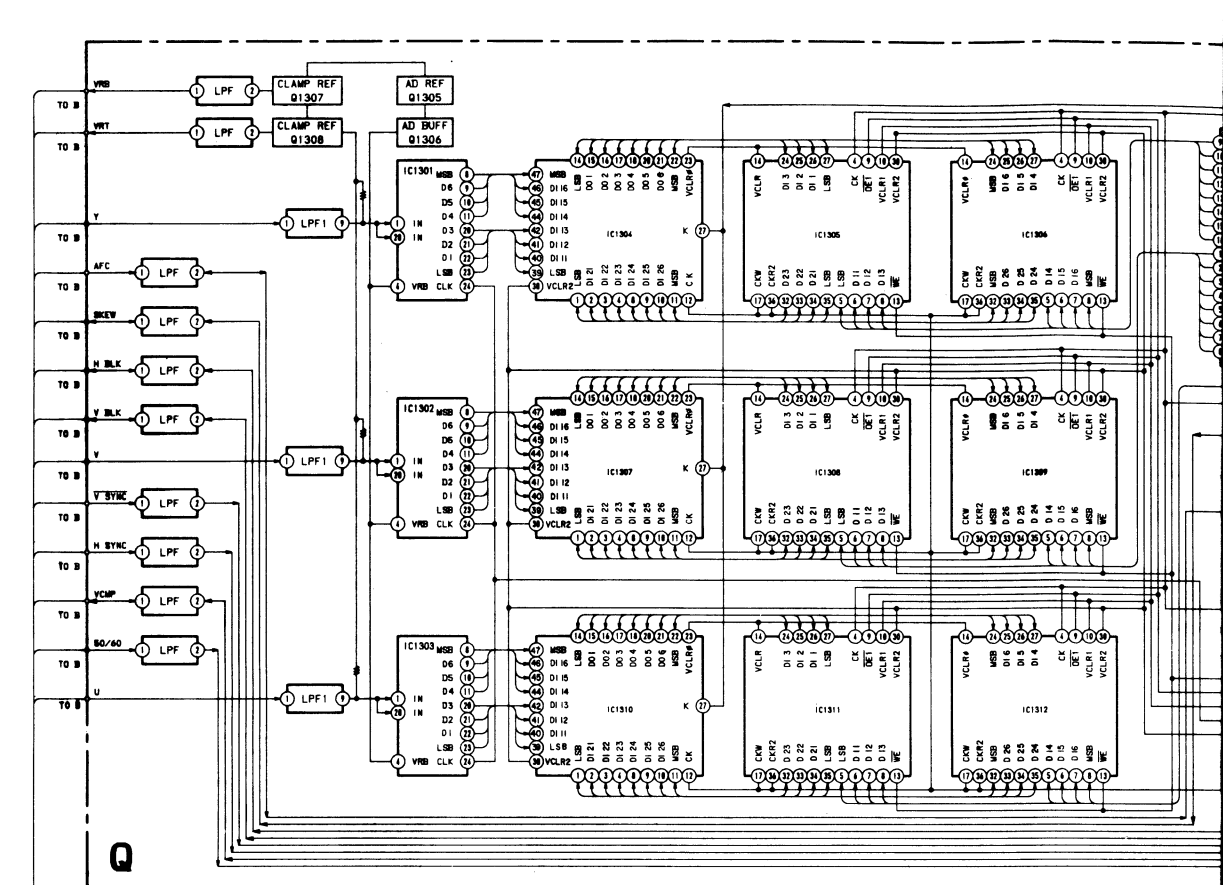
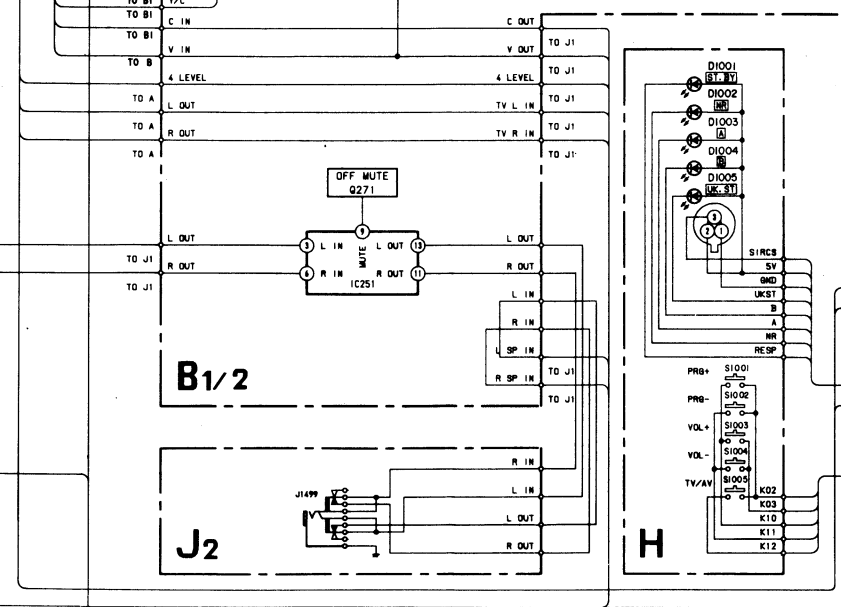
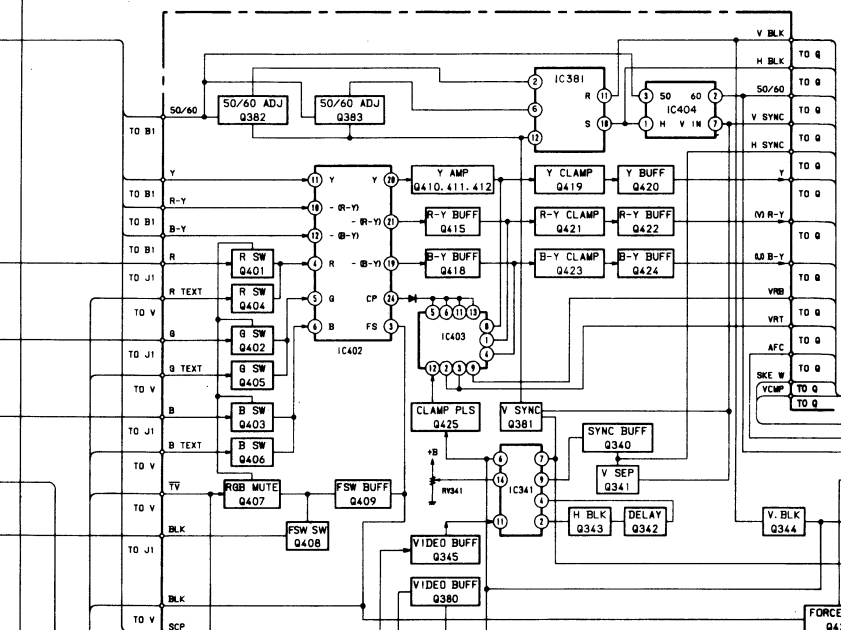
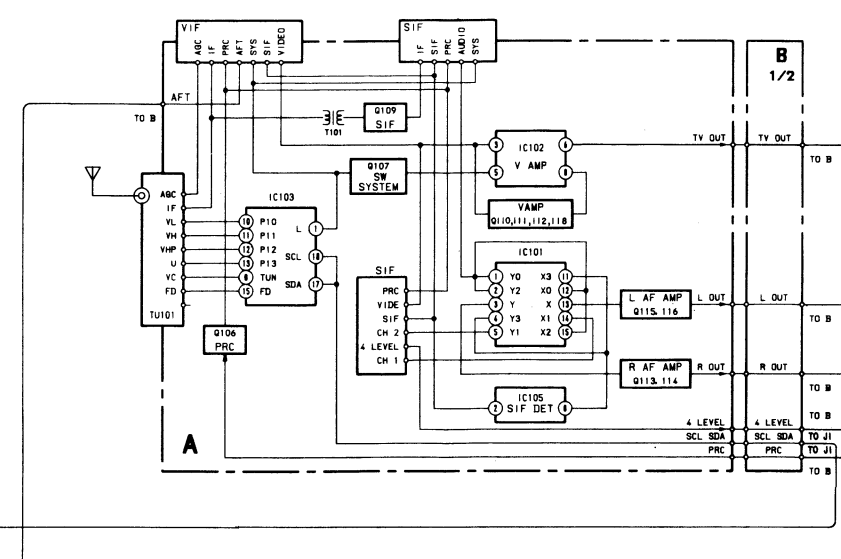
# SECTION 5 DIAGRAMS

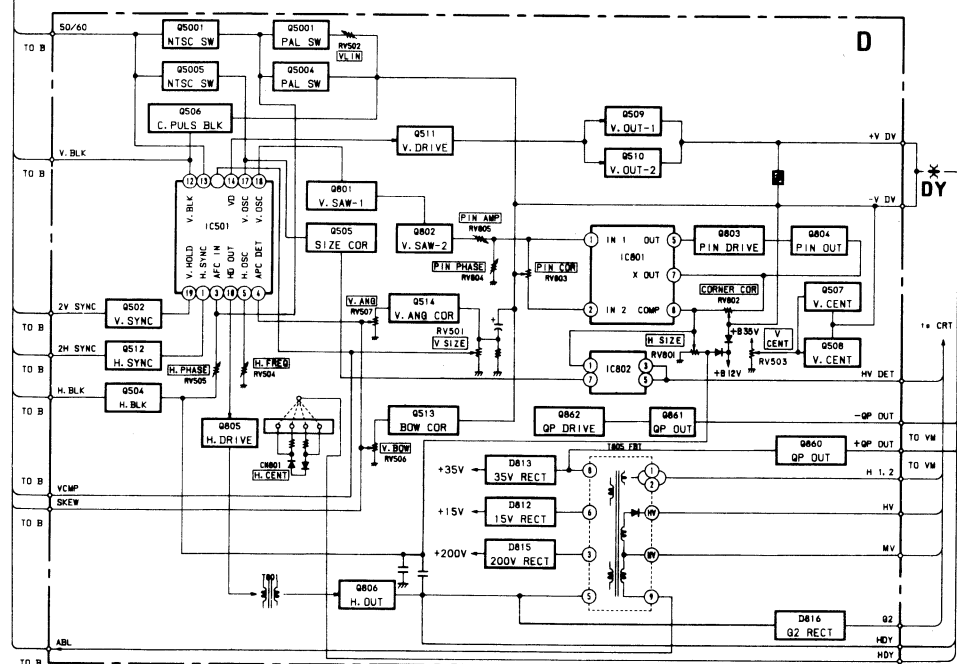
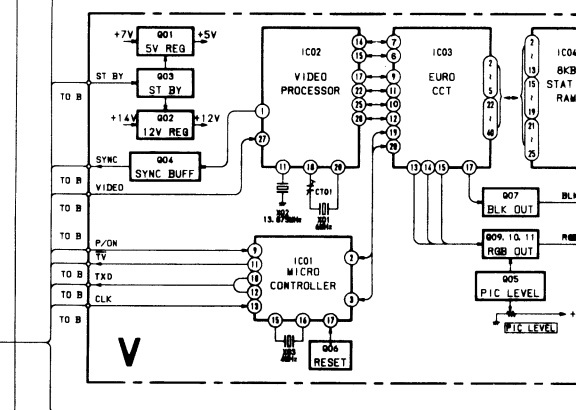
## 5-1. BLOCK DIAGRAM

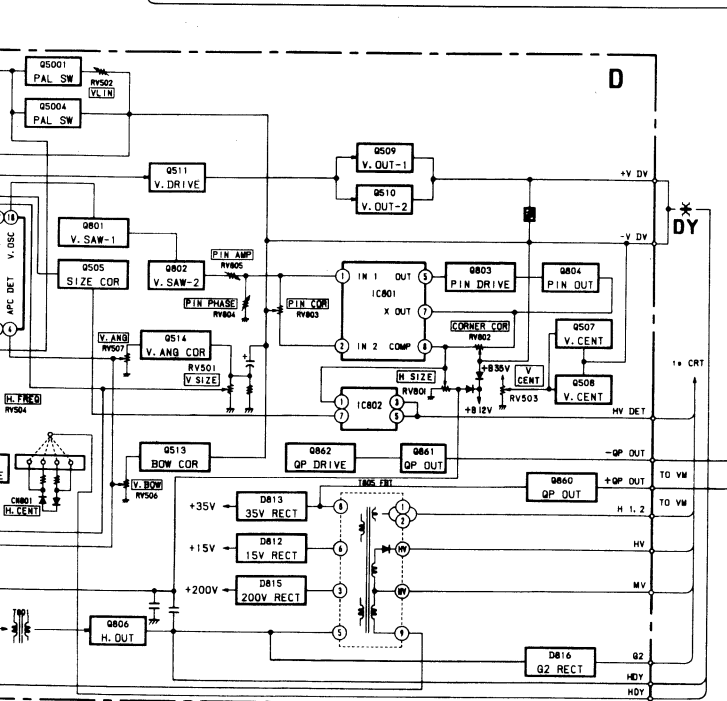
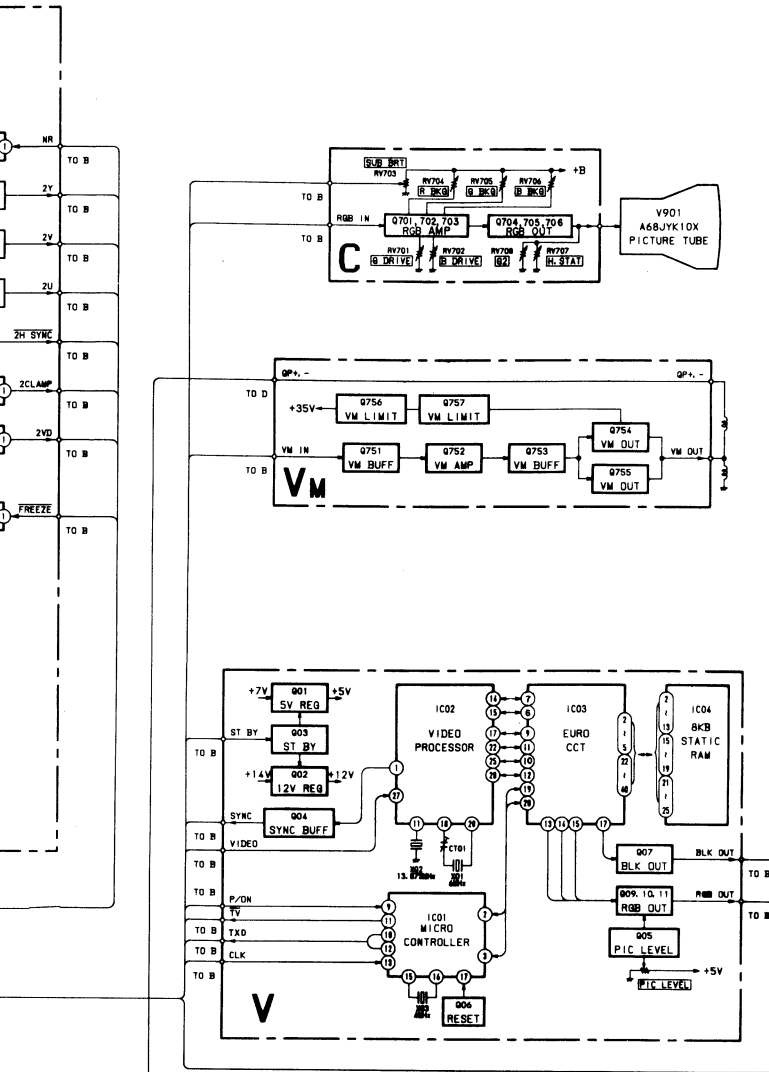


KV-FX29TD  
RM-681

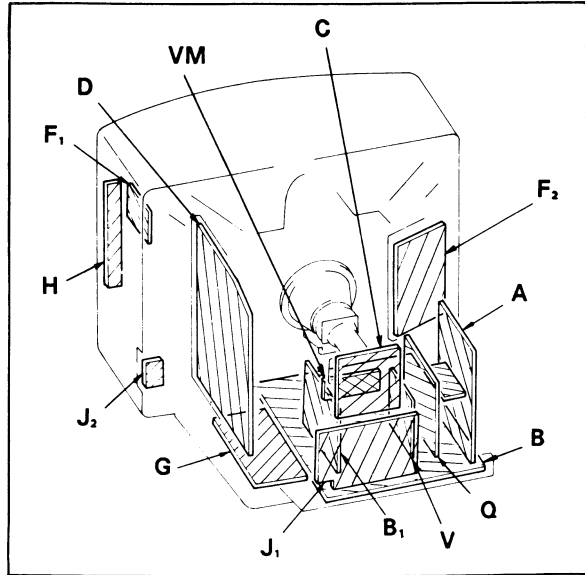
KV-FX29TD  
RM-681







5-2. CIRCUIT BOARDS LOCATION



Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power is, as follows.

Pitch: 5mm  
Rating electrical power:  $1/4\text{W}$

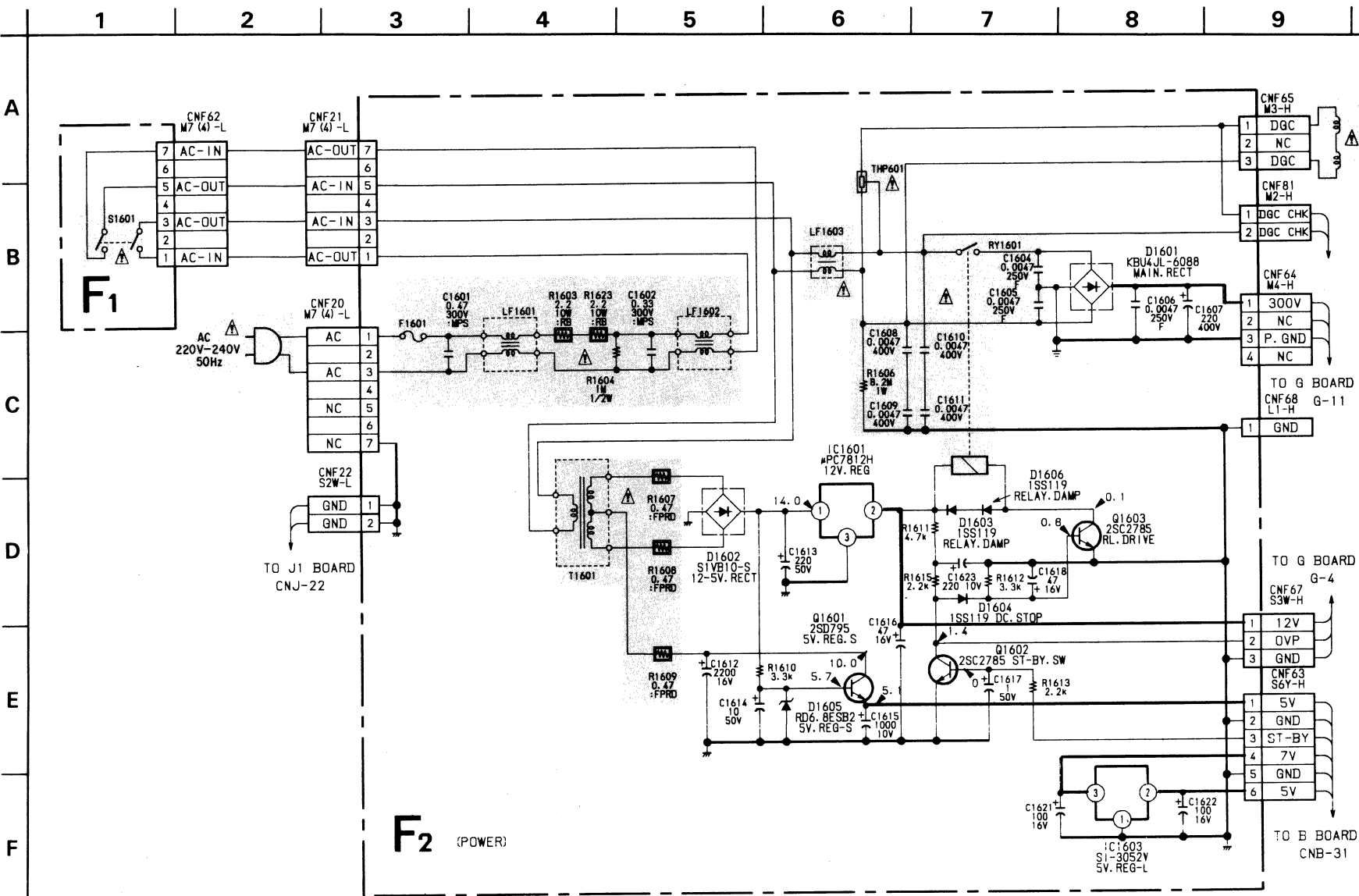
- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10M $\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- no mark: PAL
- < >: SECAM
- ( ): NTSC 3.58MHz
- [ ]: NTSC 4.43MHz
- : adjustment for repair.
- Voltage variations may be noted due to normal production tolerances.
- : B+ line
- : B-line
- : signal path.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE WIREWOUND
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ABL	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

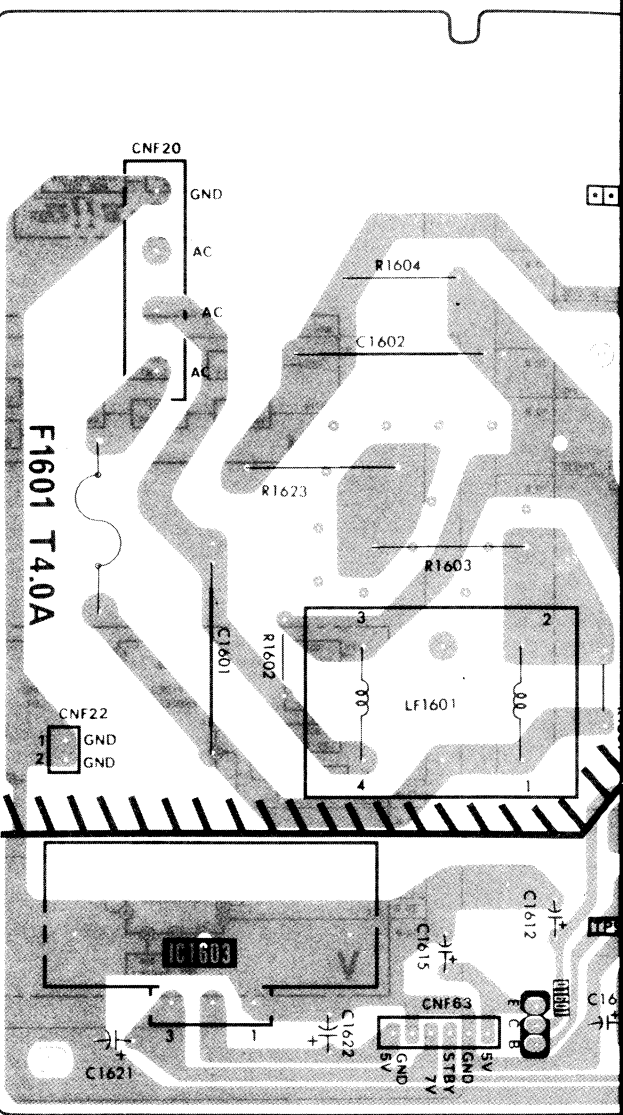
Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

5-3. SCHEMATIC DIAGRAM (1)

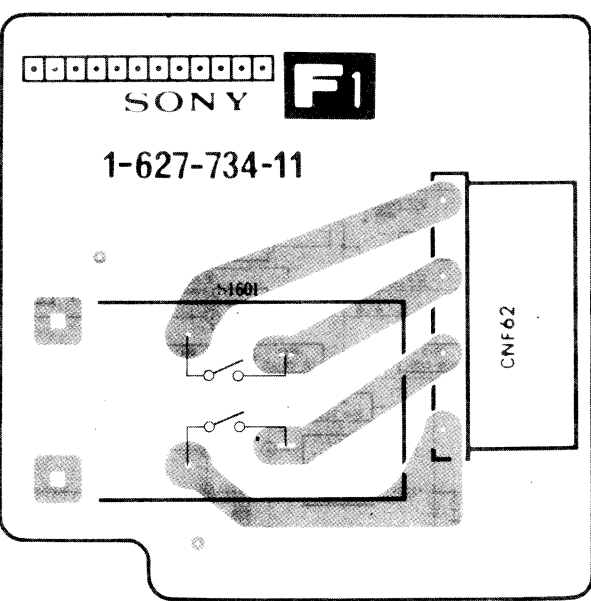


5-4. PRINTED WIRING BOARDS (1)

-F2 board-



-F1 board-



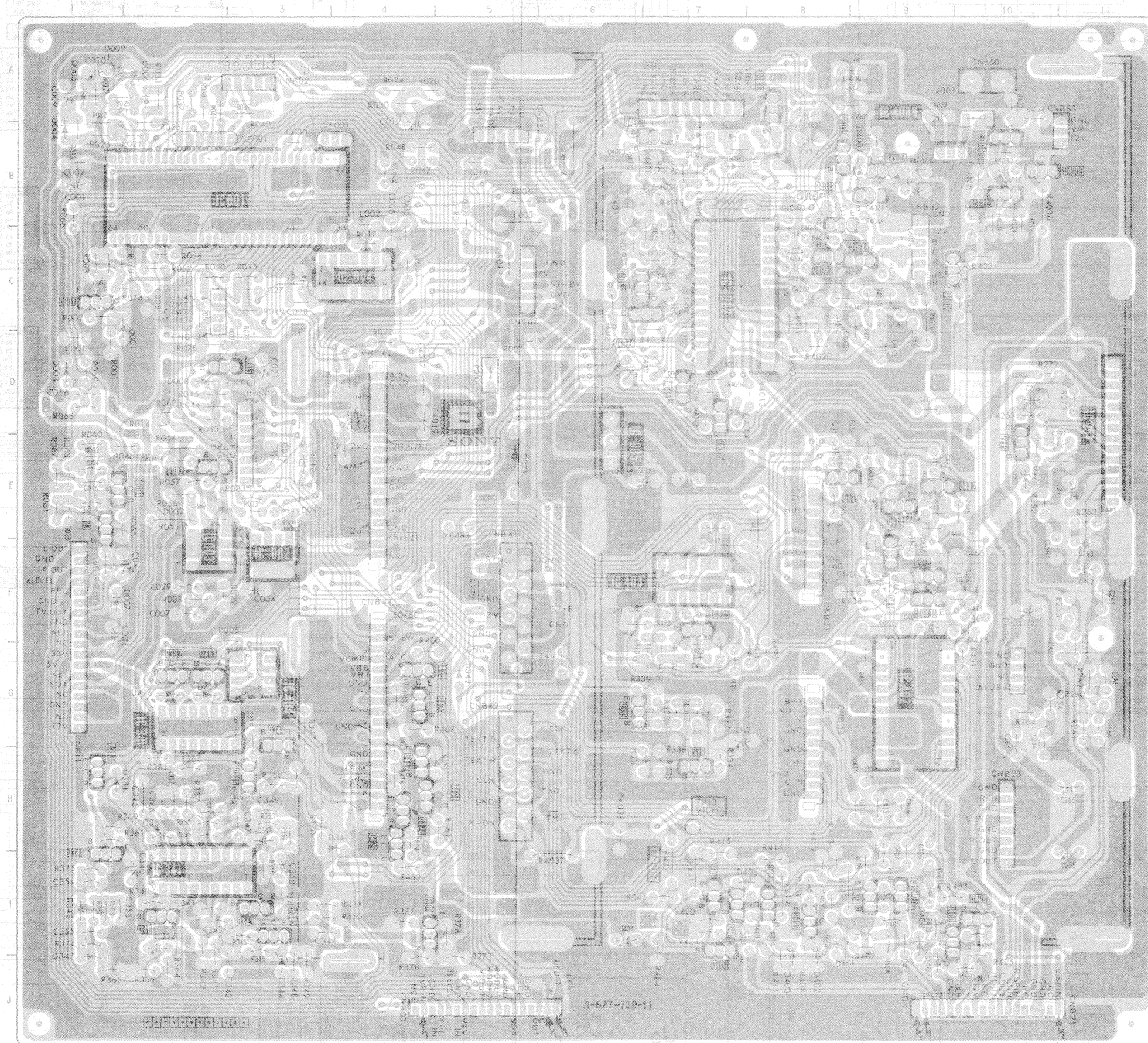






B

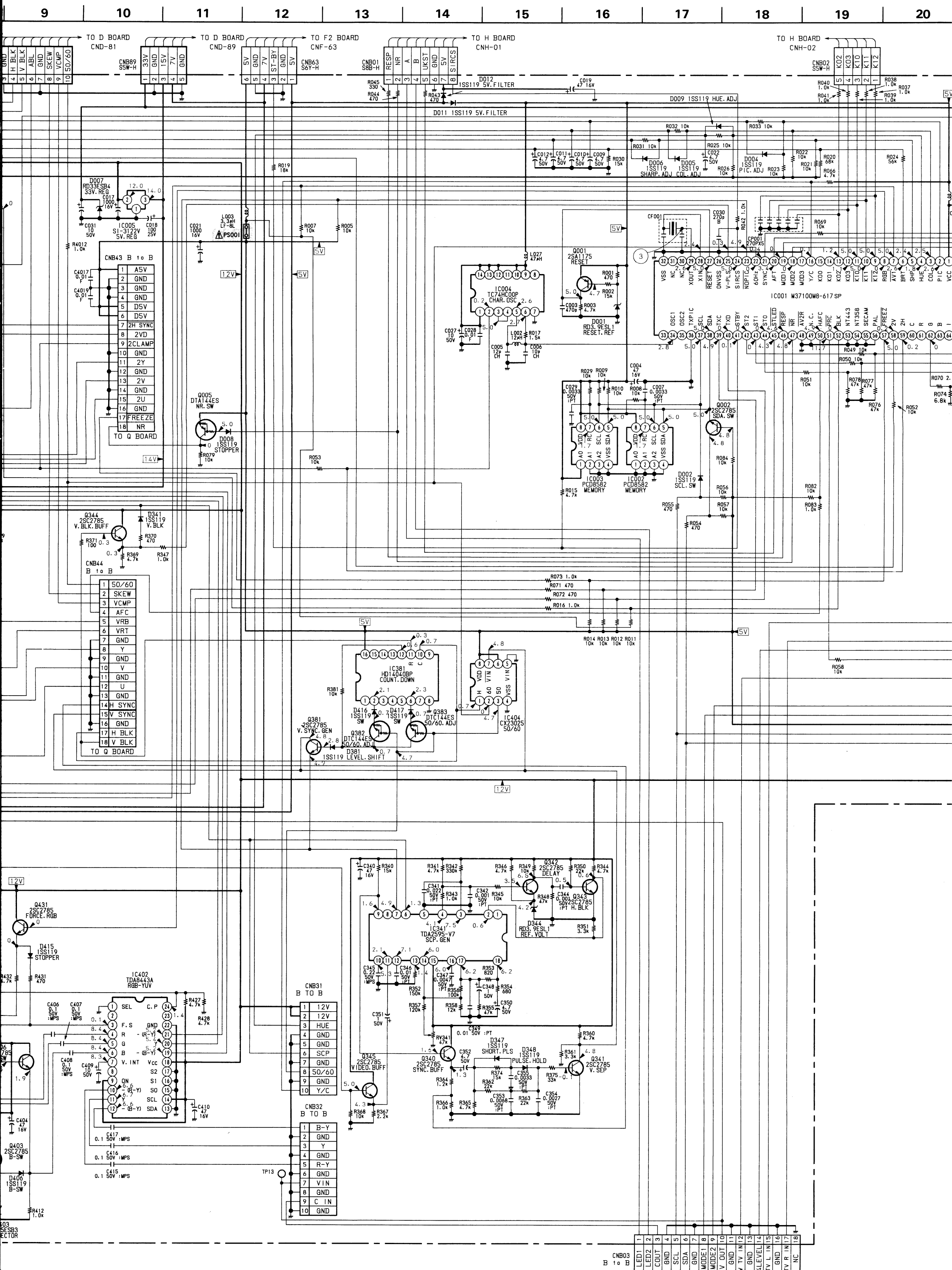
-  : Pattern on the side which is seen.
-  : Pattern of the rear side.

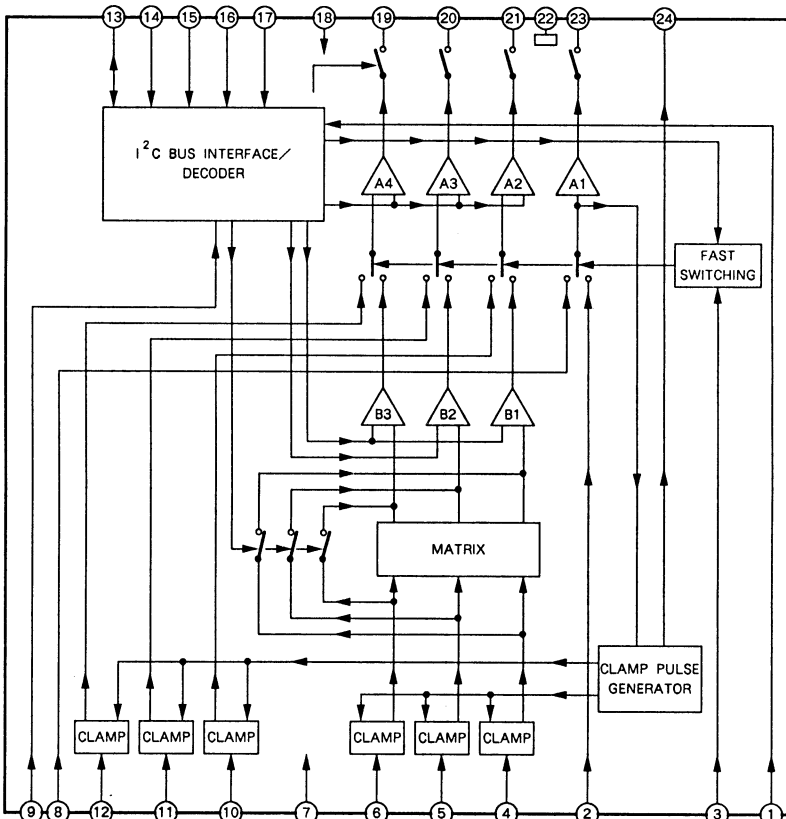


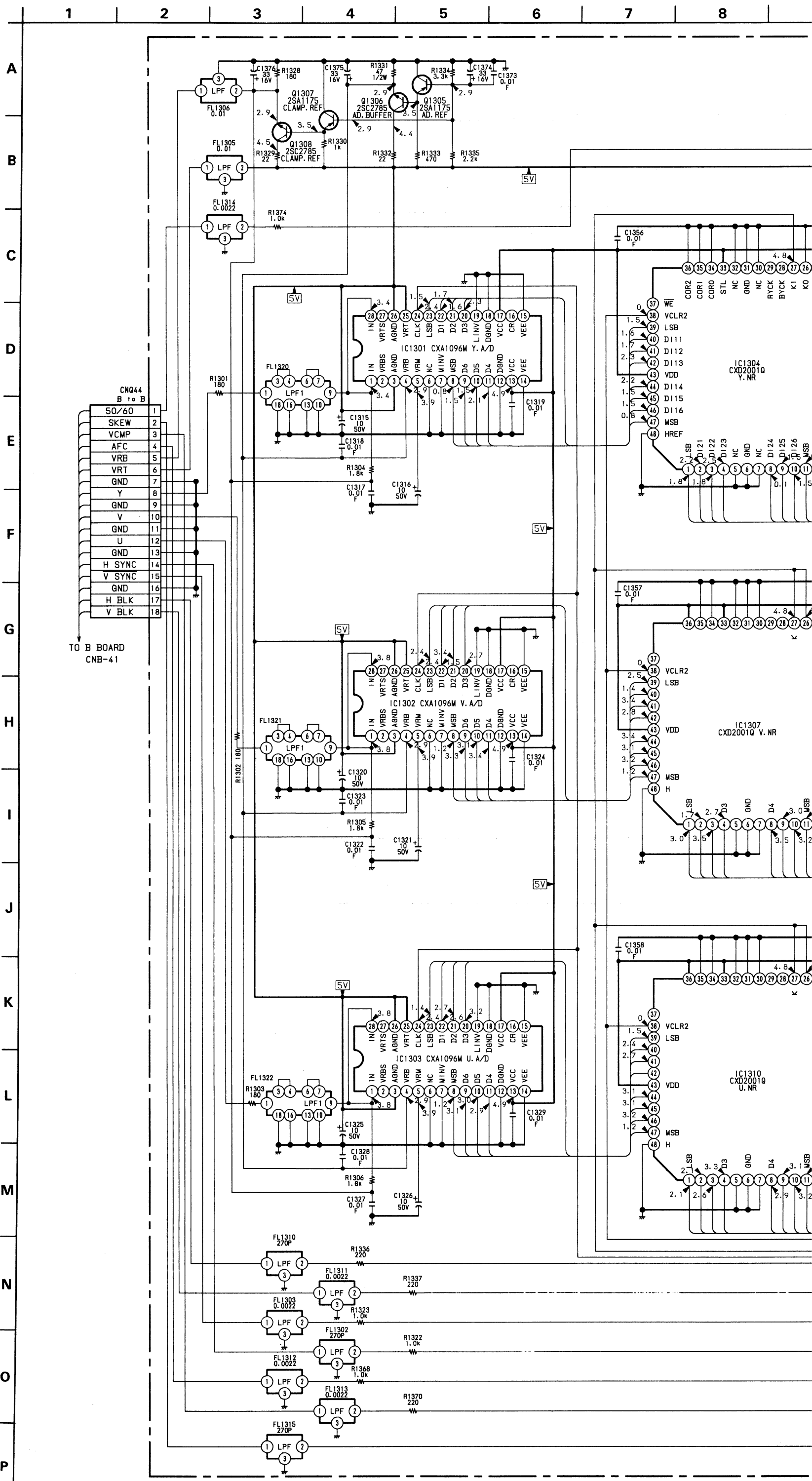
1-627-729-1

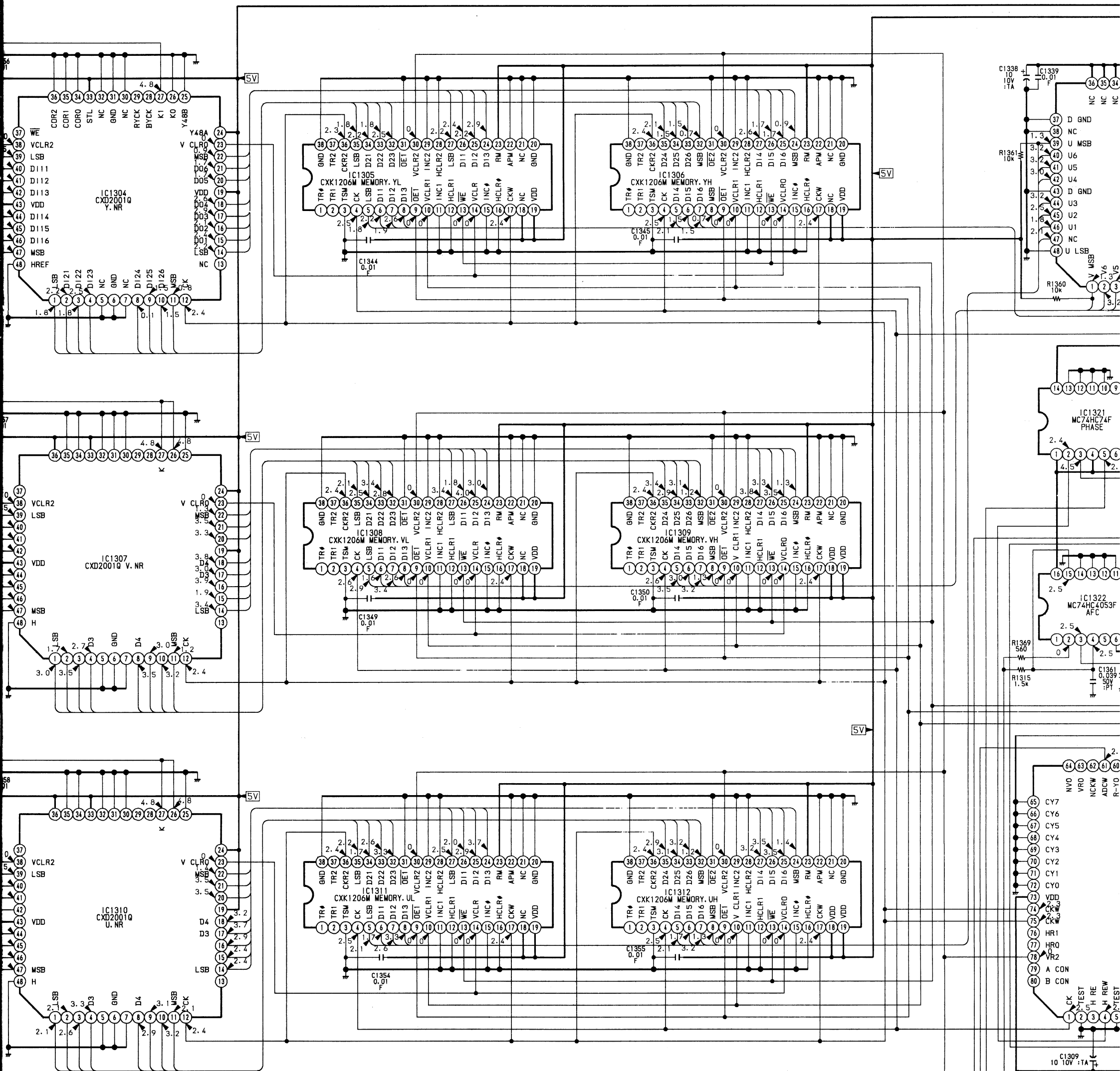


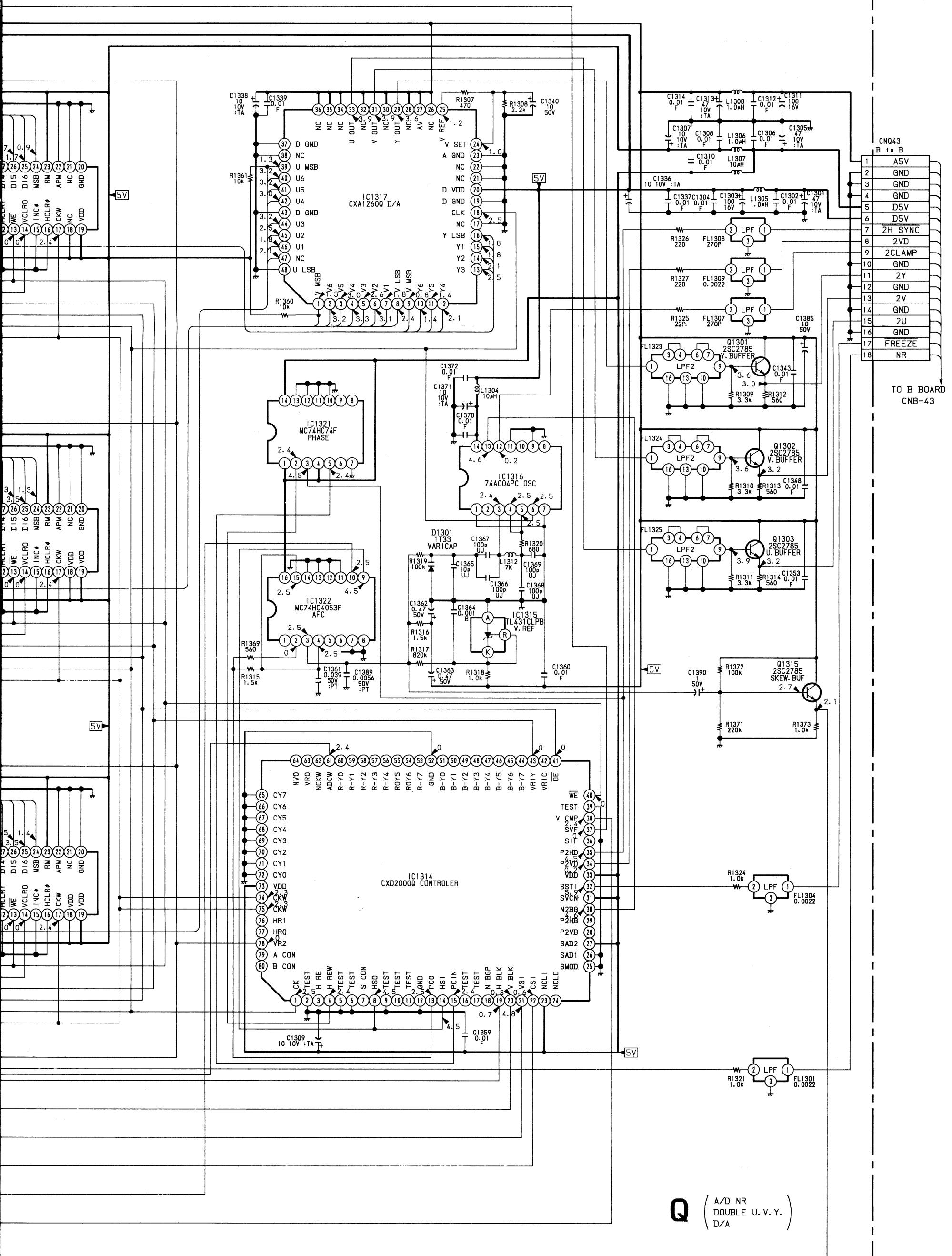












Q (A/D NR  
DOUBLE U. V. Y.  
D/A)



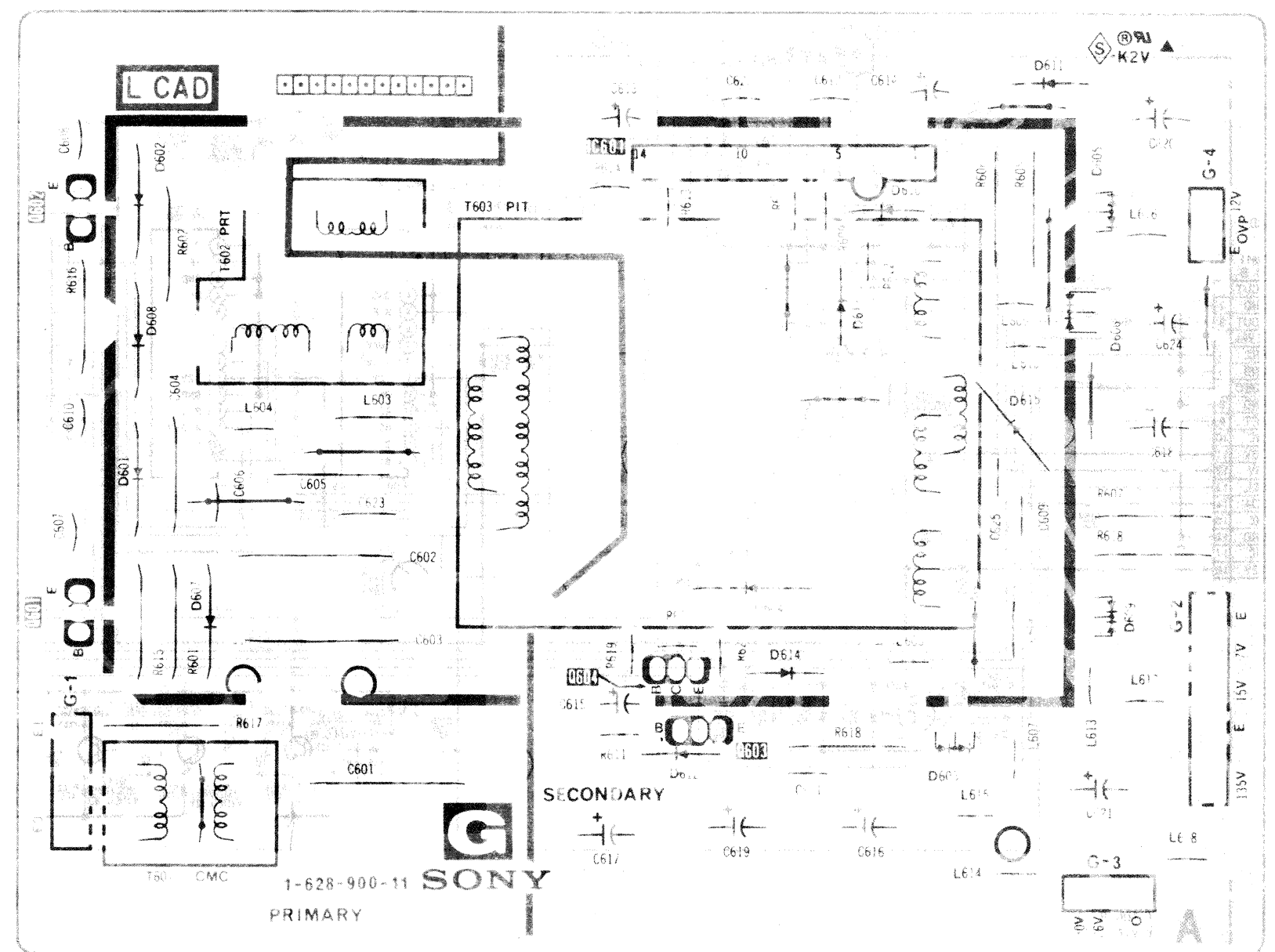
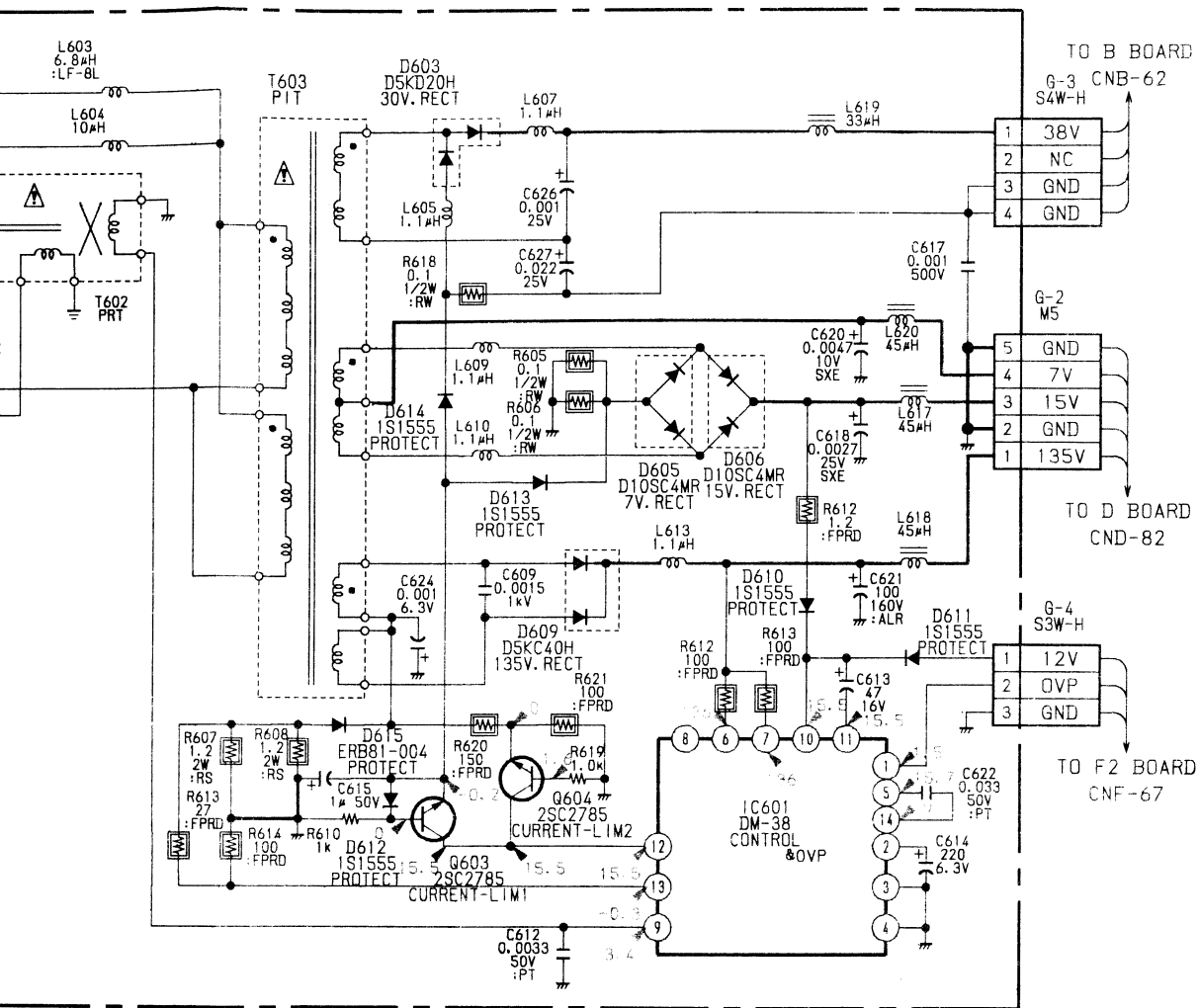


PRINTED WIRING BOARD (3)

G

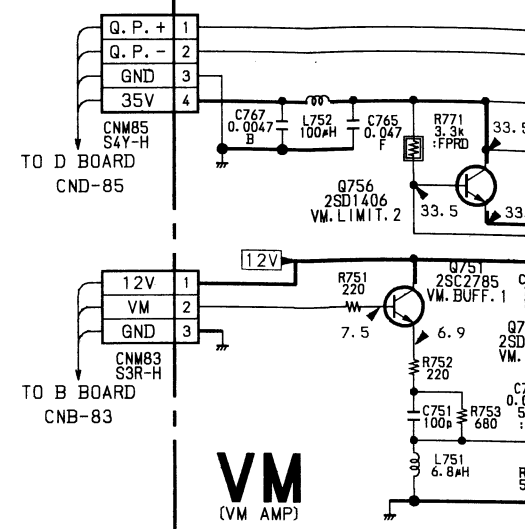
[POWER REG]

-G board-





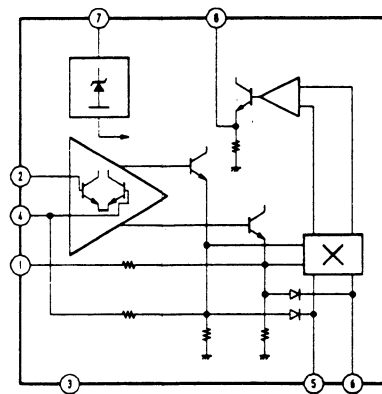
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----



②

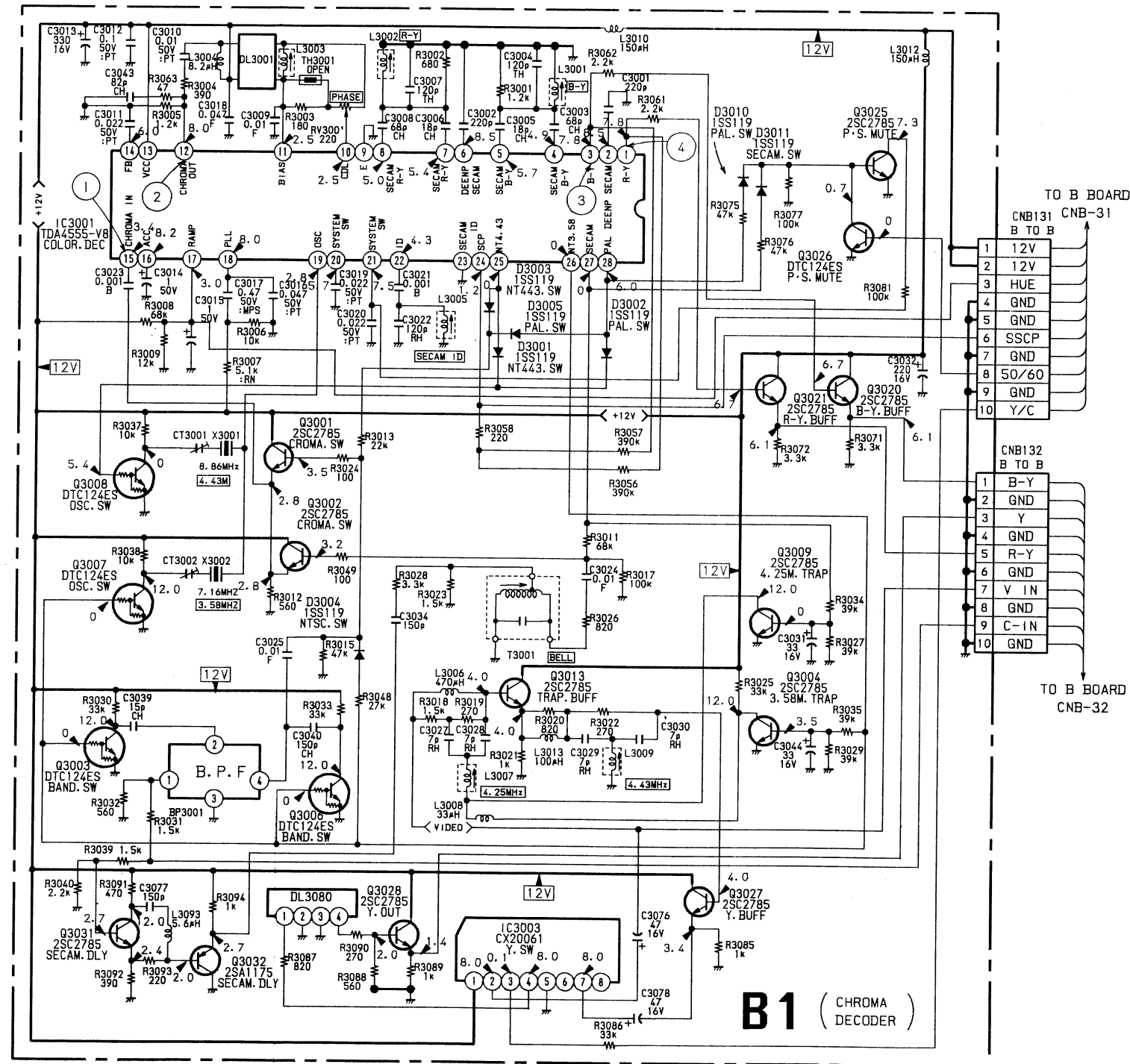
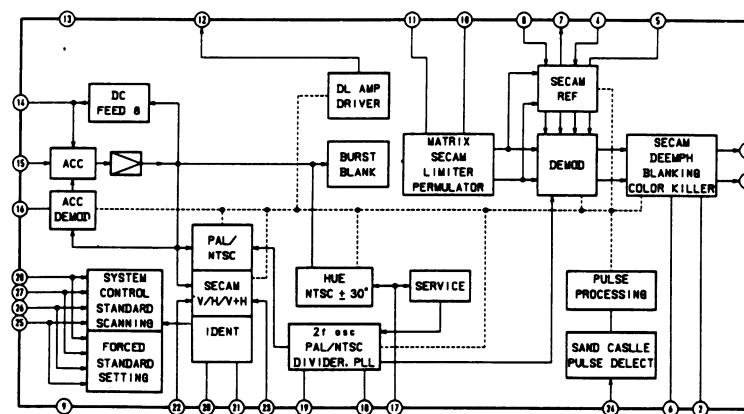
1Vp-p (H)

A BOARD IC105 TBA129

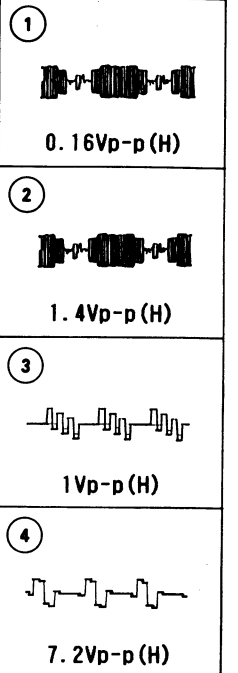




**B1 BOARD IC3001 TDA4555**



● **B1 BOARD WAVEFORM**



KV-FX29TD  
RM-681

KV-FX29TD  
RM-681

TUNER  
VIF SIF

A

B1

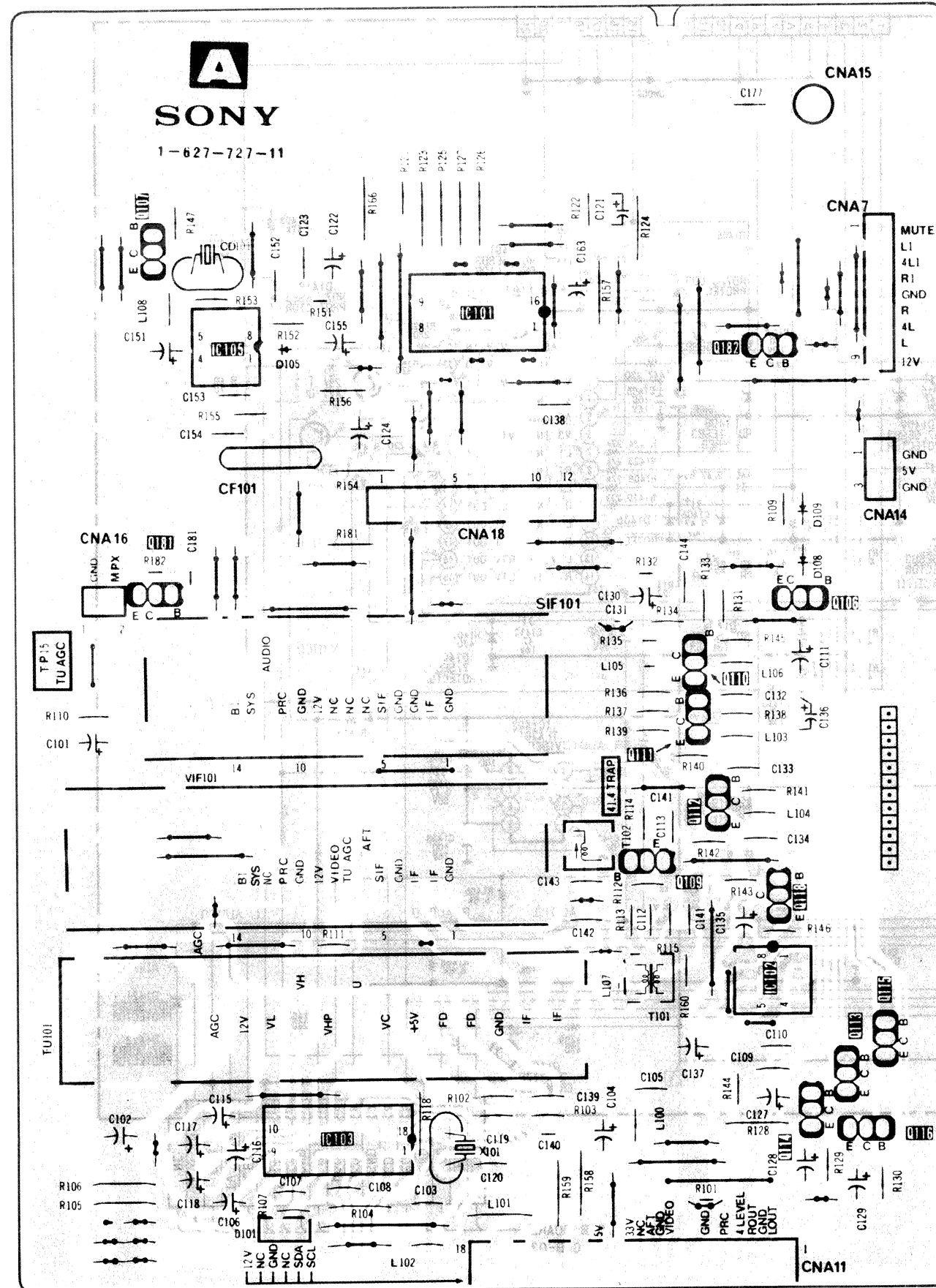
CHROMA  
DECODER

VM

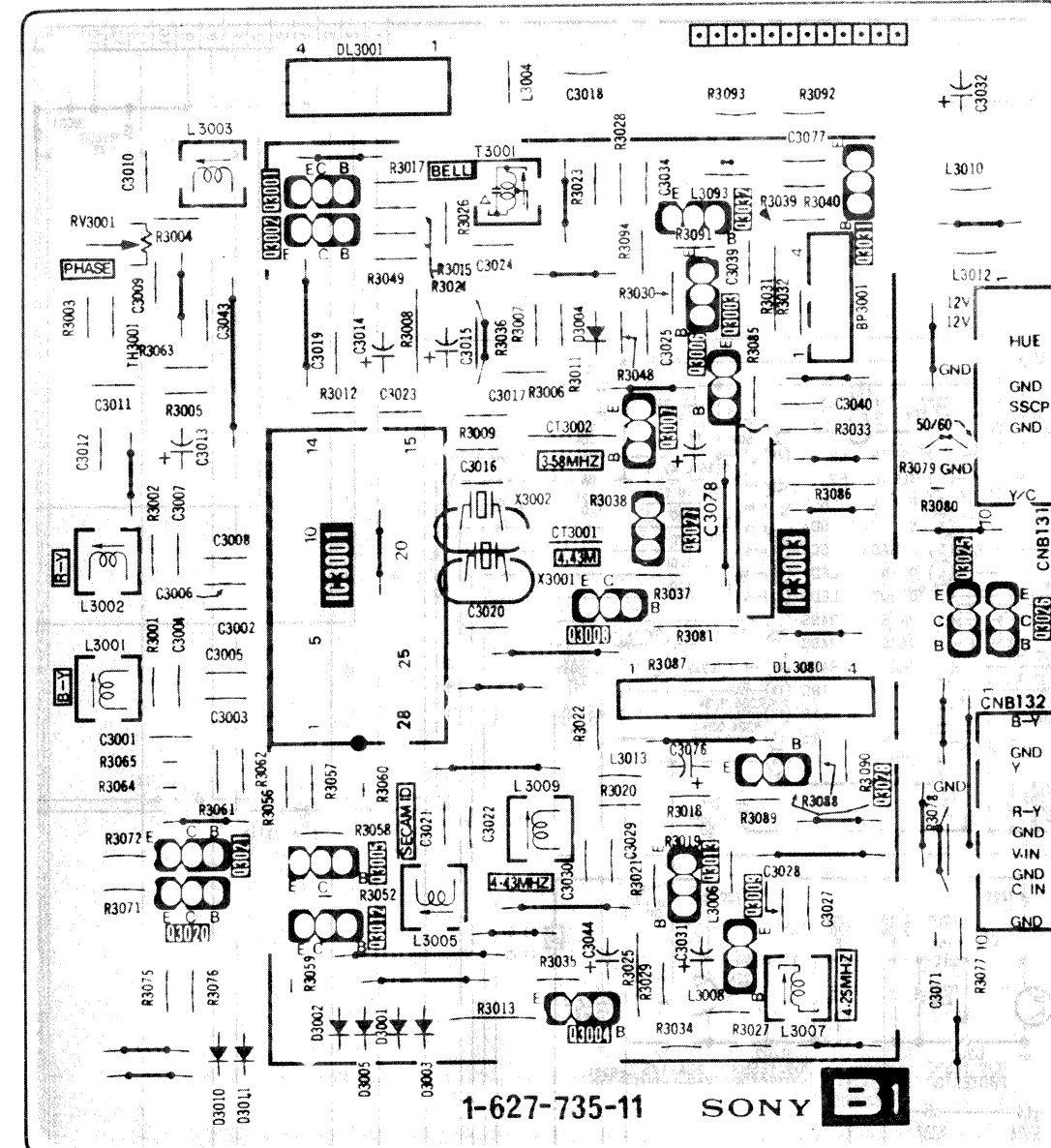
[VM AMP]

PRINTED WIRING BOARDS (4)

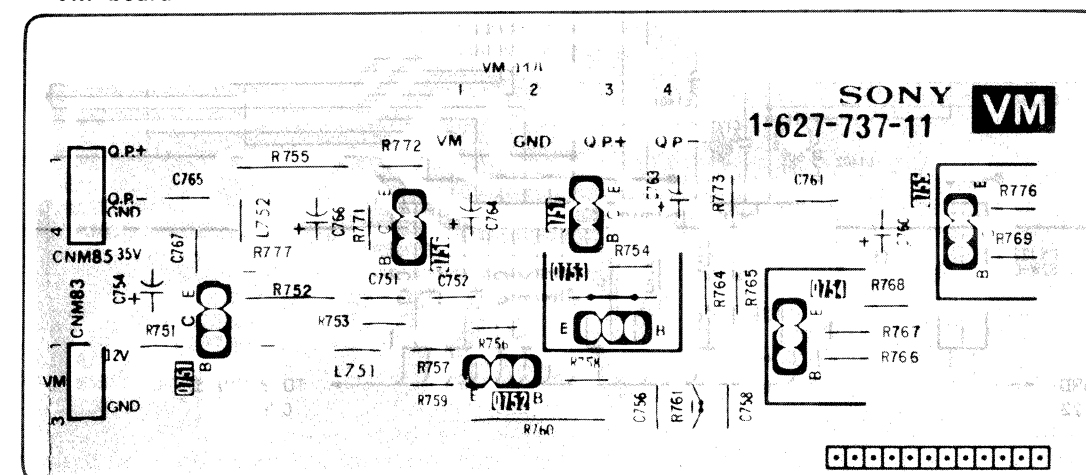
-A board-



-B1 board-



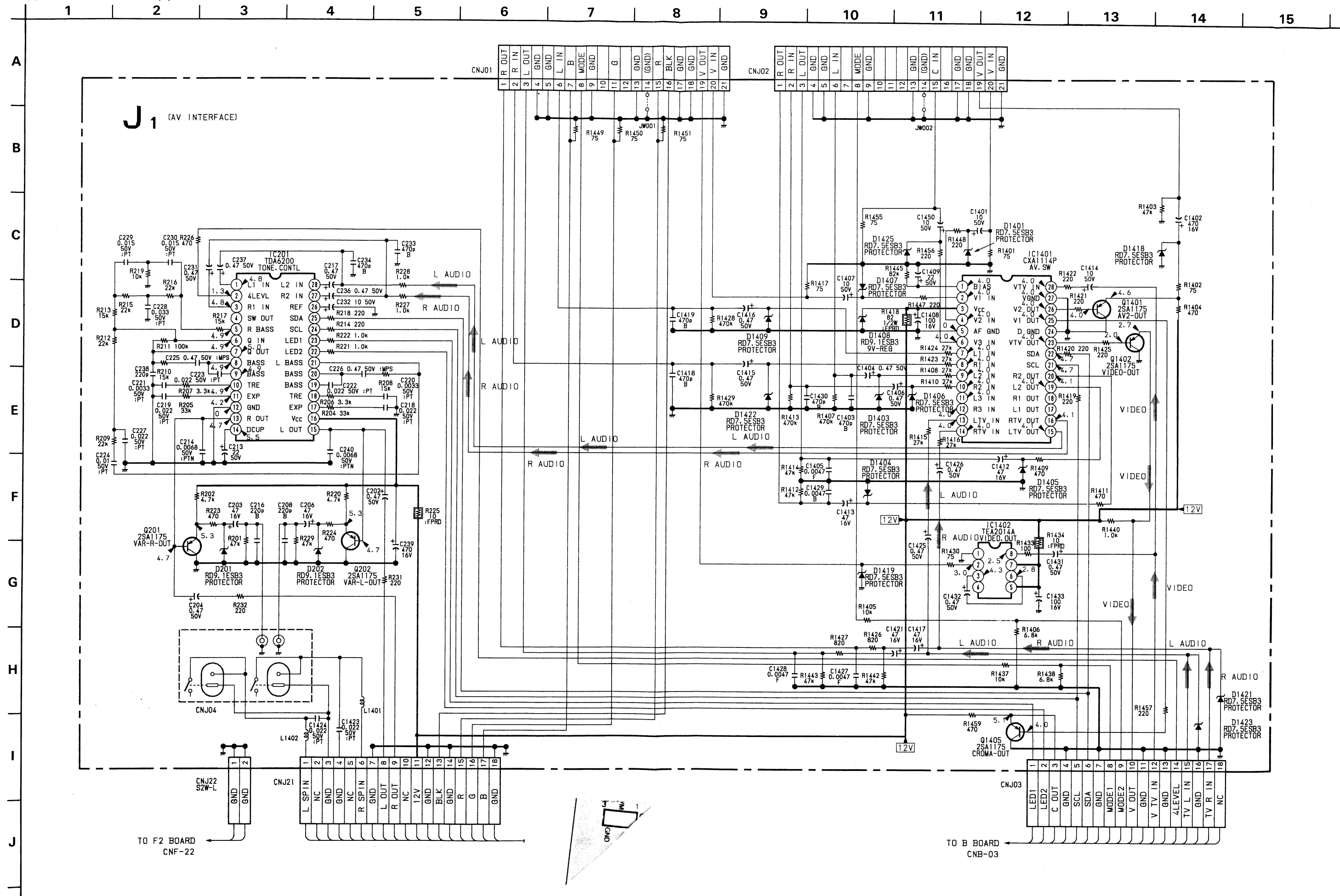
-VM board-



KV-FX29TD  
RM-681

KV-FX29TD  
RM-681

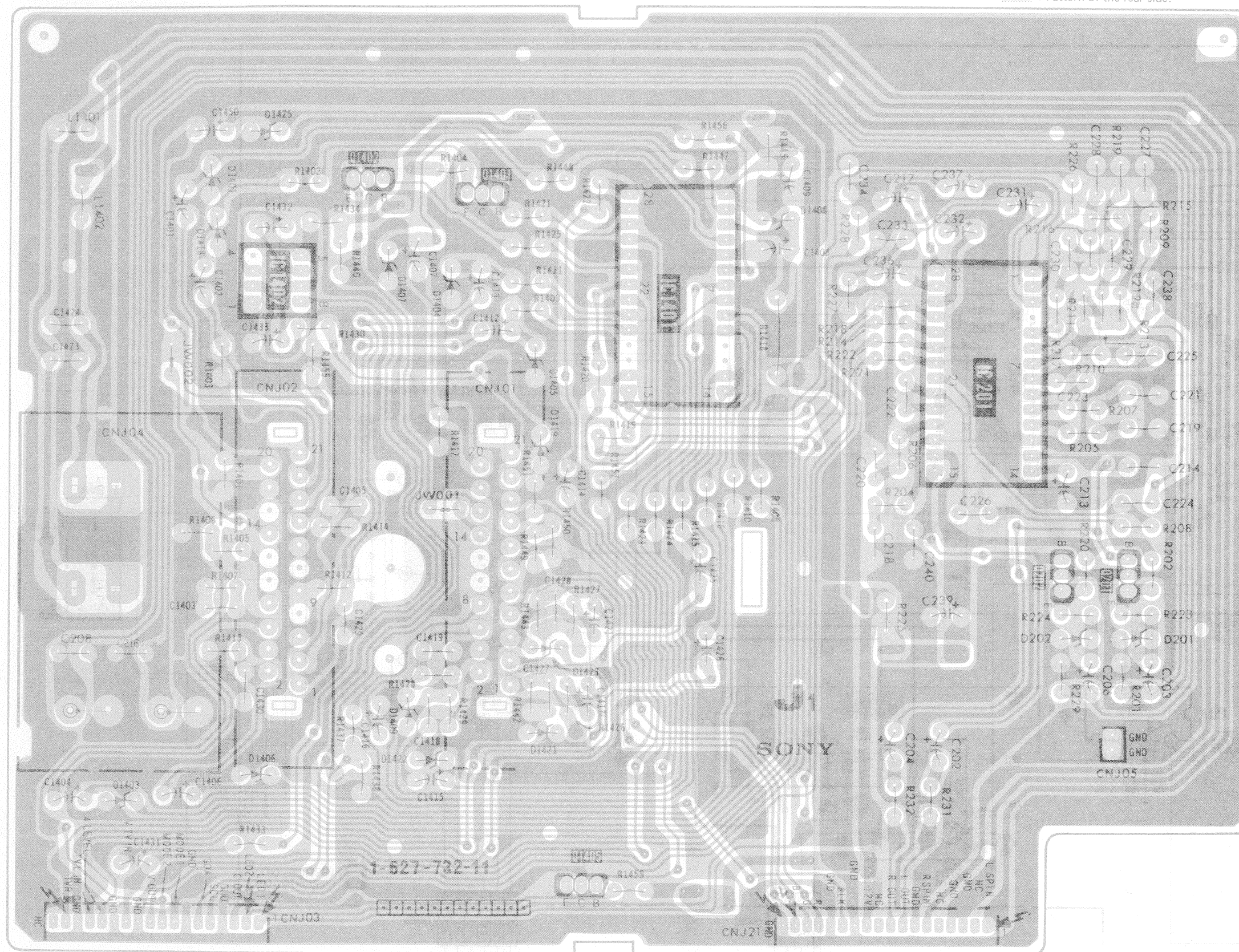
SCHEMATIC DIAGRAM (5)



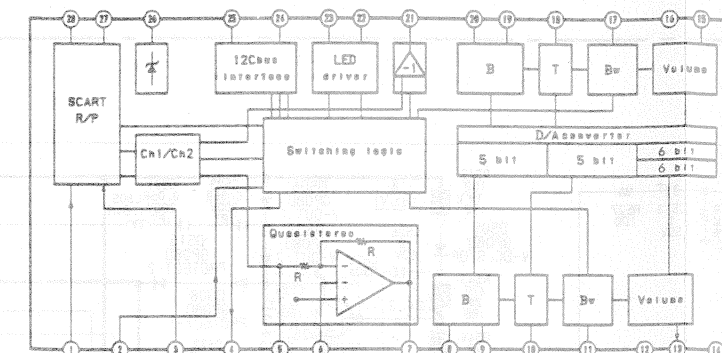


-J1 board-

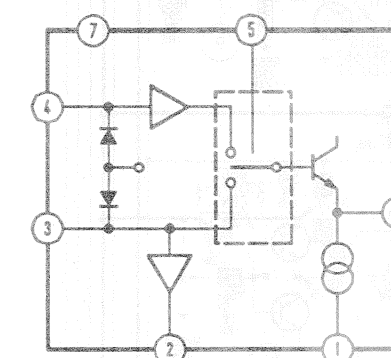
- : Pattern on the side which is seen.
- : Pattern of the rear side.



J1 BOARD IC201 TDA6200



J1 BOARD IC1402 TEA2014A

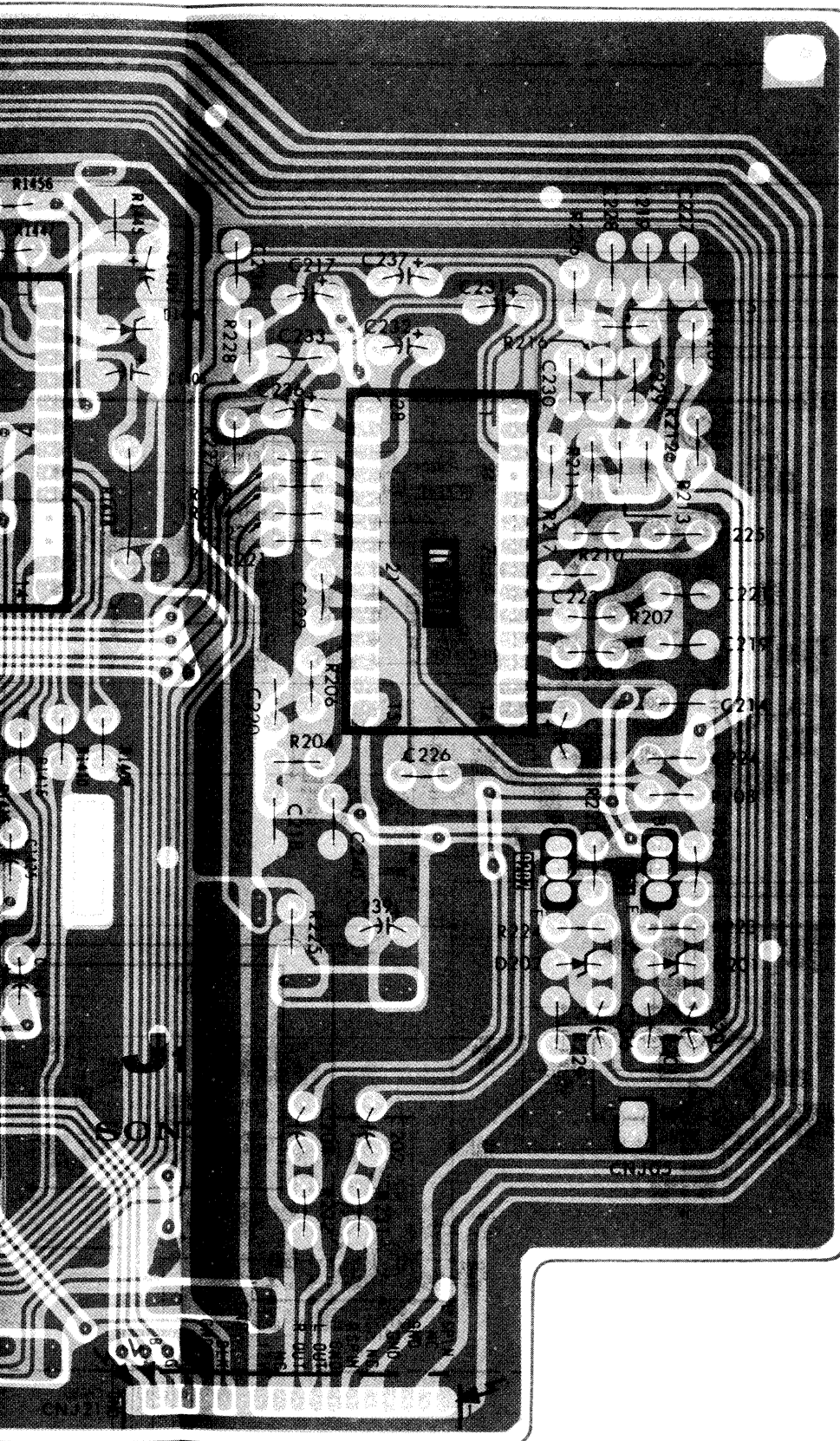




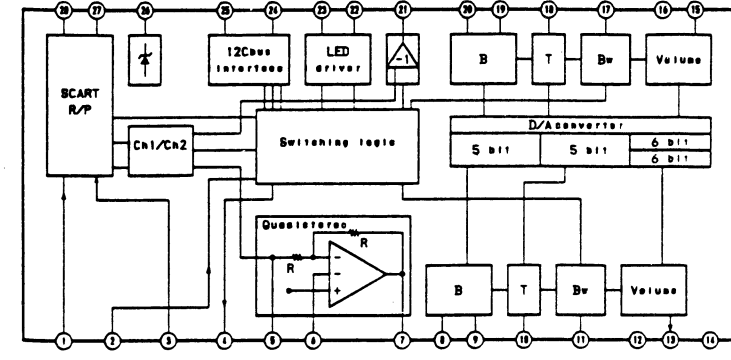
J1

J1

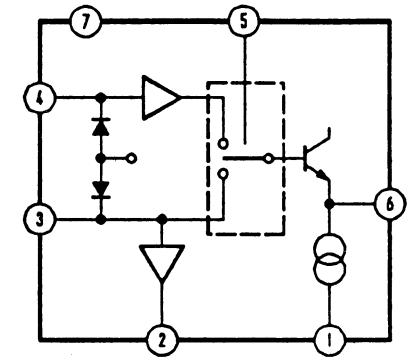
- : Pattern on the side which is seen.
- : Pattern of the rear side.



J1 BOARD IC201 TDA6200



J1 BOARD IC1402 TEA2014A

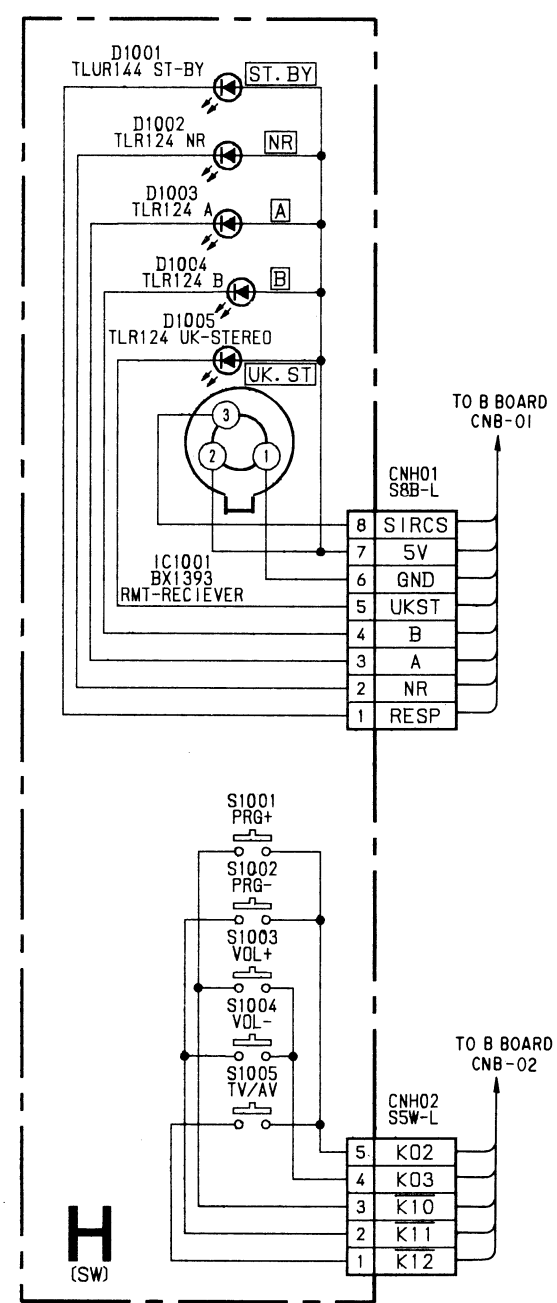


SCHEMATIC DIAGRAM (6)

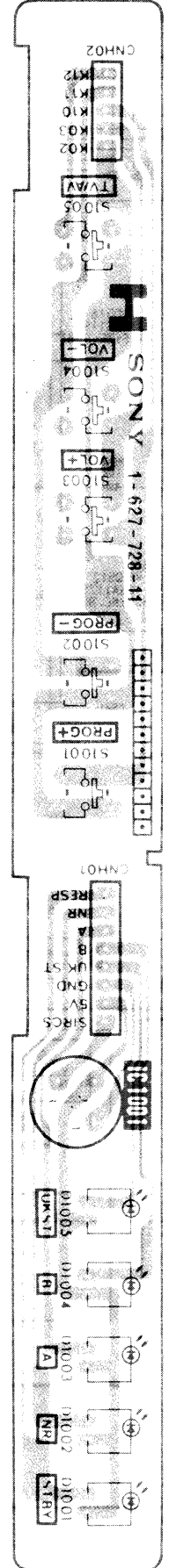
PRINTED WIRING BOARD (6)

[SW] H

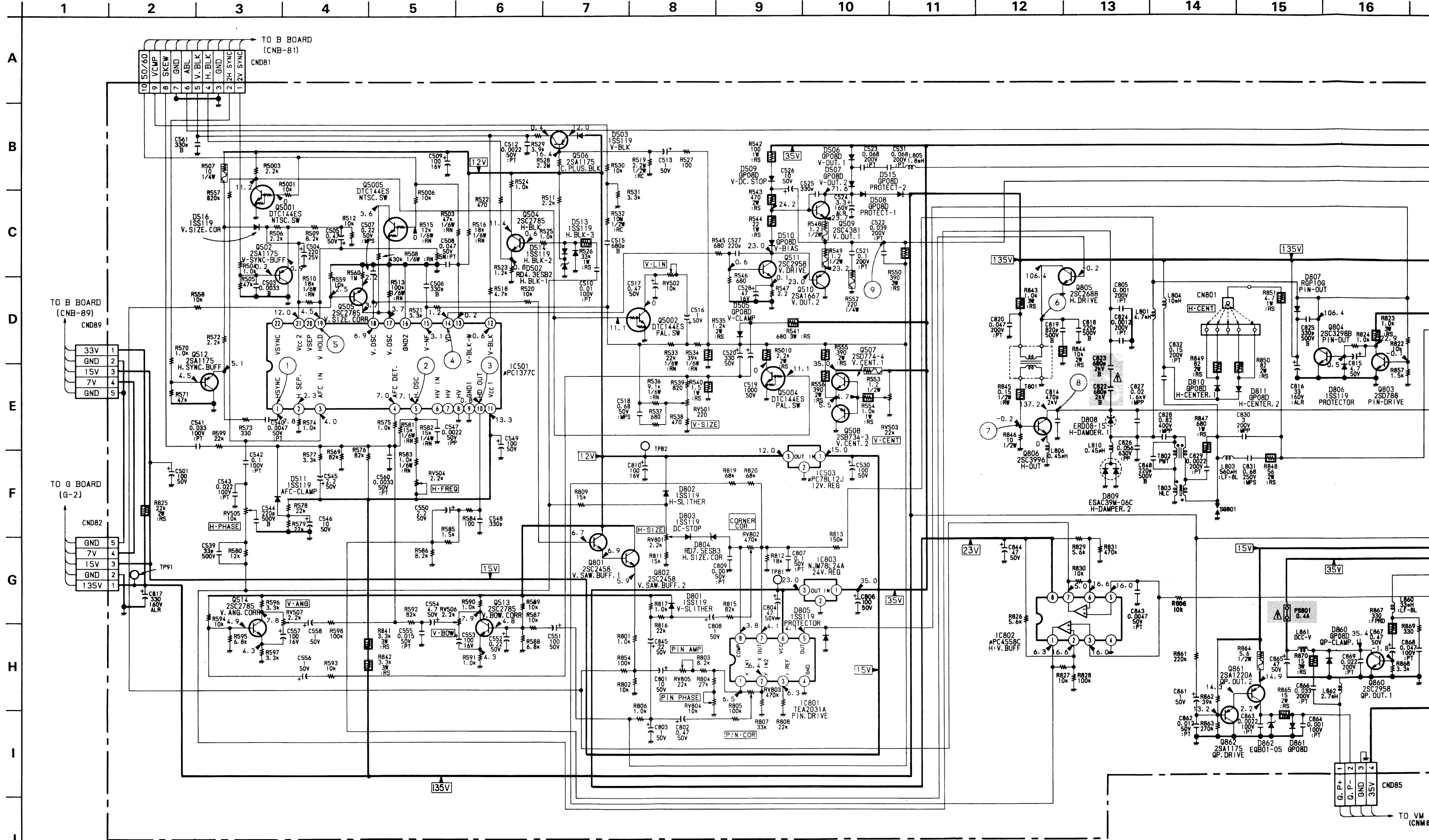
A  
B  
C  
D  
E  
F  
G  
H

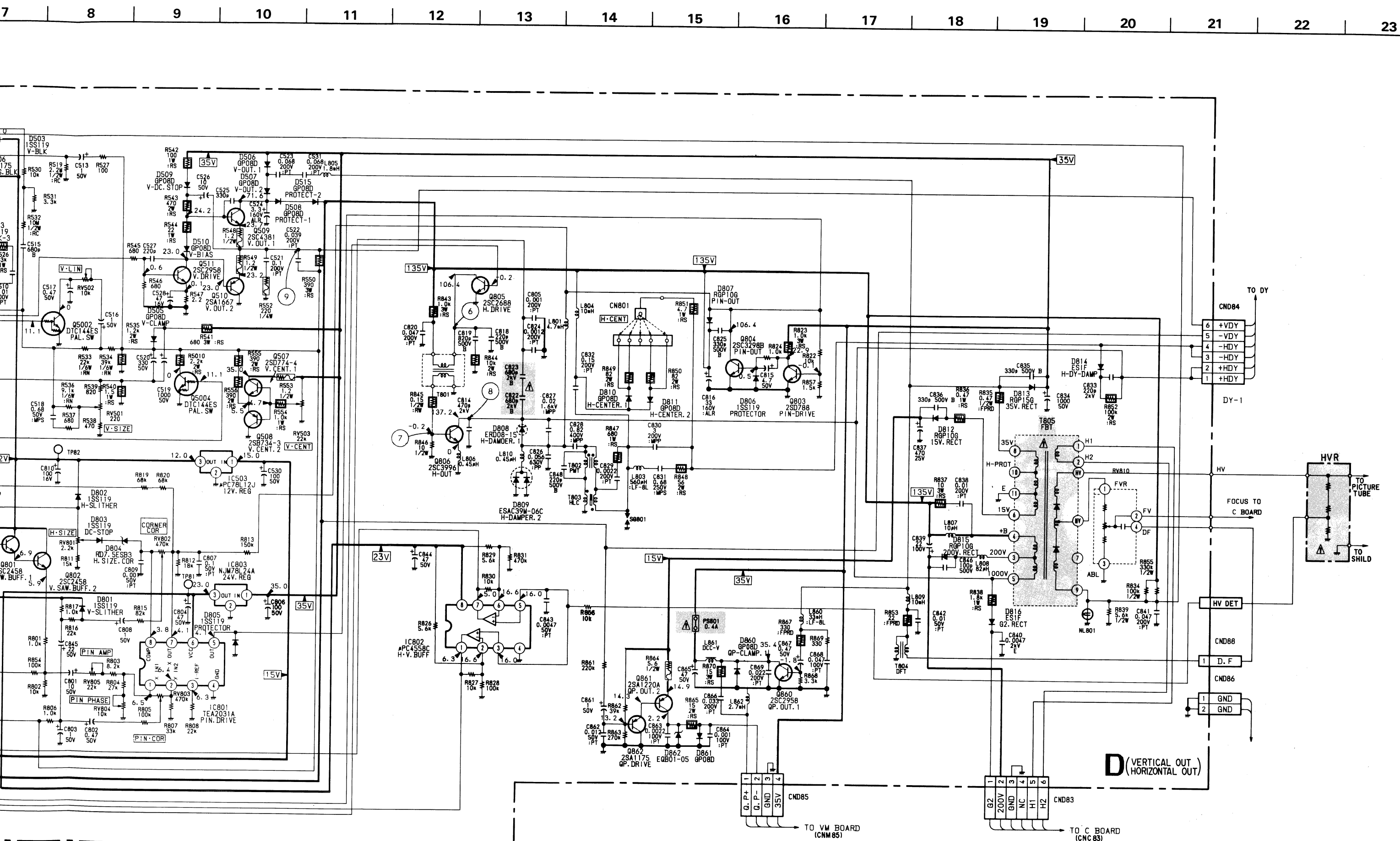


-H board-

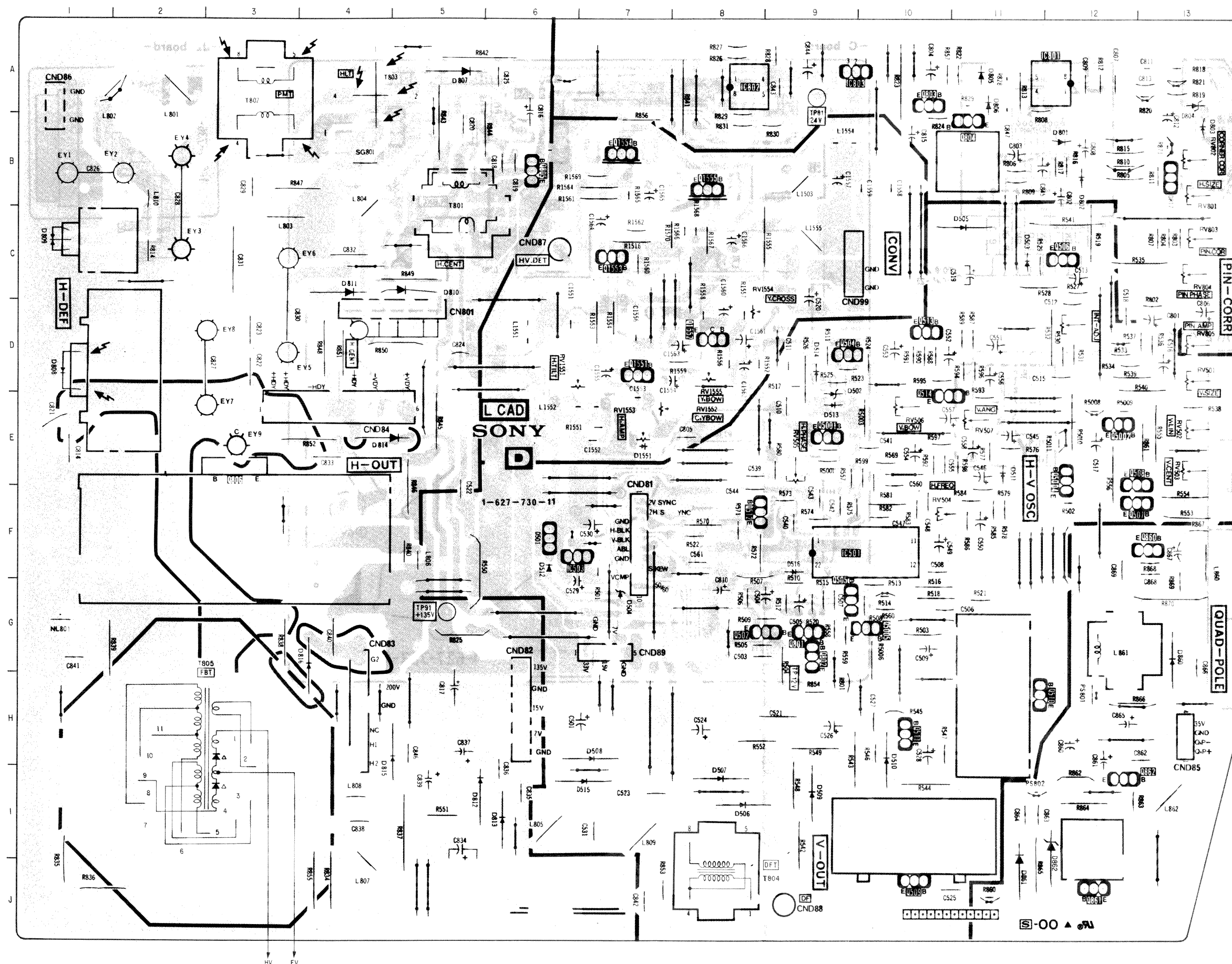


SCHEMATIC DIAGRAM (7)



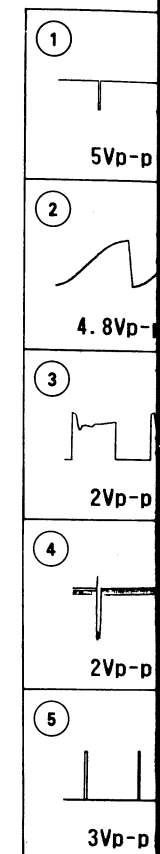
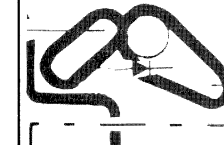




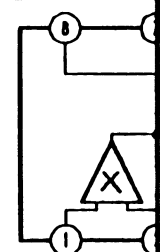


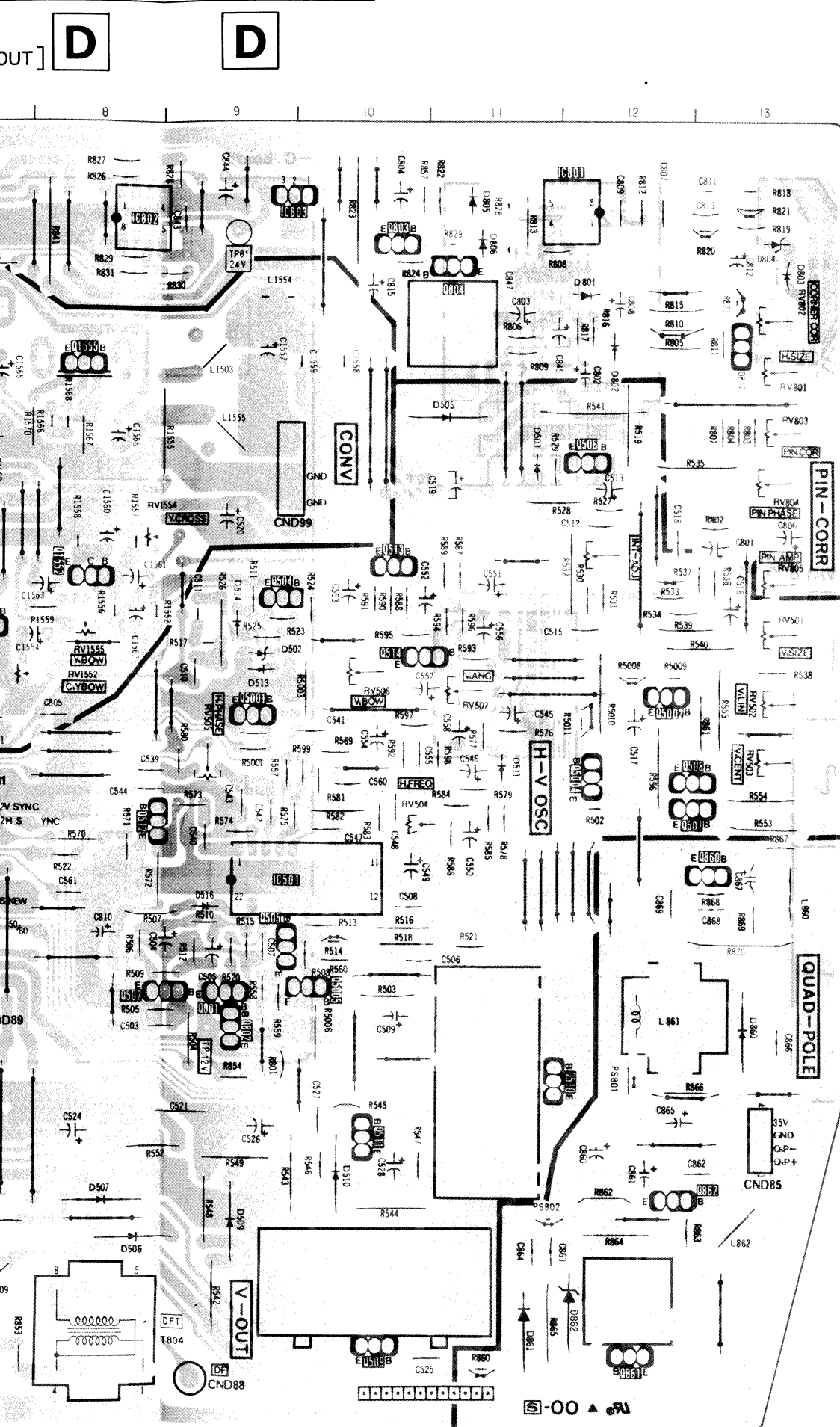
IC		D511	E-11
IC501	F-9	D513	E-9
IC503	F-6	D514	D-9
IC801	A-12	D515	I-7
IC802	A-8	D516	F-9
IC803	A-9		
TRANSISTOR		D801	B-12
		D802	B-12
		D803	B-13
		D805	A-11
		D806	A-11
Q502	G-8		
Q504	D-9		
Q505	G-9		
Q506	C-12		
Q507	F-12	D807	A-5
		D808	D-1
		D809	C-1
Q508	E-12	D810	C-5
Q509	J-10	D811	C-4
Q510	H-11		
Q511	H-10		
Q512	F-8	D812	I-5
		D813	I-6
		D814	E-4
Q513	D-10	D815	H-5
Q514	E-10	D816	G-4
Q801	G-9		
Q802	G-9		
Q803	A-10	D860	G-13
		D861	J-11
		D862	I-12
Q804	B-11		
Q805	B-6		
Q806	E-3	VARIABLE RESISTOR	
Q860	F-13	RV501	D-13
Q861	J-12	RV502	E-13
		RV503	E-13
Q862	I-12	RV504	F-10
Q5001	E-9	RV505	E-9
Q5002	E-12		
Q5004	E-12	RV506	E-10
Q5005	G-10	RV507	E-11
		RV801	B-13
DIODE		RV802	B-13
		RV803	C-13
		RV804	C-13
		RV805	D-13
D502	D-9		
D503	C-11		
D505	C-11		
D506	I-8		
D507	I-8		
D508	H-7		
D509	I-9		
D510	H-10		

The circuit indicated as left contains high voltage (up to 600 Vp-p). Care must be paid to prevent an electric shock during inspection or repairing.



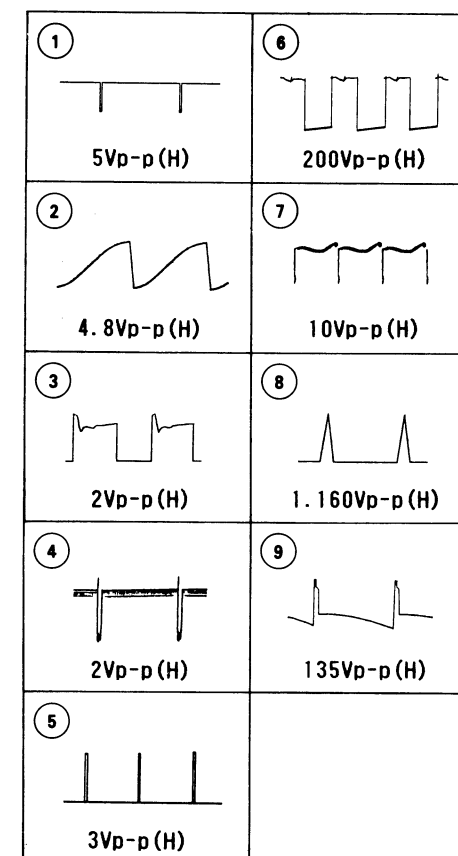
D BOARD I



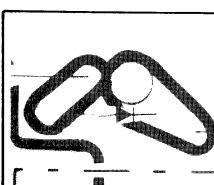
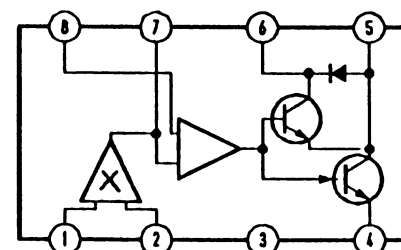


IC		
IC501	F-9	D511 E-11
IC503	F-6	D513 E-9
IC801	A-12	D514 D-9
IC802	A-8	D515 I-7
IC803	A-9	D516 F-9
TRANSISTOR		
Q502	G-8	D801 B-12
Q504	D-9	D802 B-12
Q505	G-9	D803 B-13
Q506	C-12	D805 A-11
Q507	F-12	D806 A-11
Q508	E-12	D807 A-5
Q509	J-10	D808 D-1
Q510	H-11	D809 C-1
Q511	H-10	D810 C-5
Q512	F-8	D811 C-4
Q513	D-10	D812 I-5
Q514	E-10	D813 I-6
Q801	G-9	D814 E-4
Q802	G-9	D815 H-5
Q803	A-10	D816 G-4
Q804	B-11	D860 G-13
Q805	B-6	D861 J-11
Q806	E-3	D862 I-12
Q860	F-13	
Q861	J-12	
Q862	I-12	
Q5001	E-9	
Q5002	E-12	
Q5004	E-12	
Q5005	G-10	
DIODE		
D502	D-9	
D503	C-11	
D505	C-11	
D506	I-8	
D507	I-8	
D508	H-7	
D509	I-9	
D510	H-10	
VARIABLE RESISTOR		
RV501	D-13	
RV502	E-13	
RV503	E-13	
RV504	F-10	
RV505	E-9	
RV506	E-10	
RV507	E-11	
RV801	B-13	
RV802	B-13	
RV803	C-13	
RV804	C-13	
RV805	D-13	

● D BOARD WAVEFORM



D BOARD IC801 TEA2031A



**NOTE:**  
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

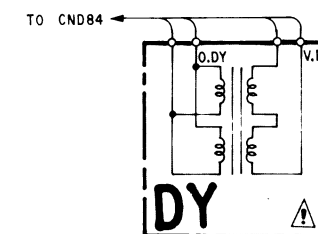
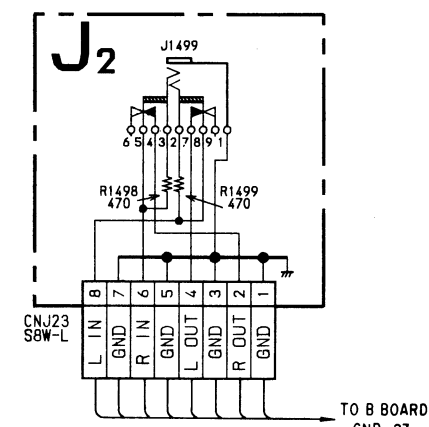
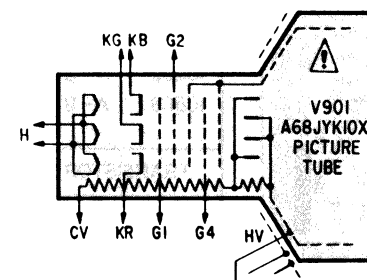
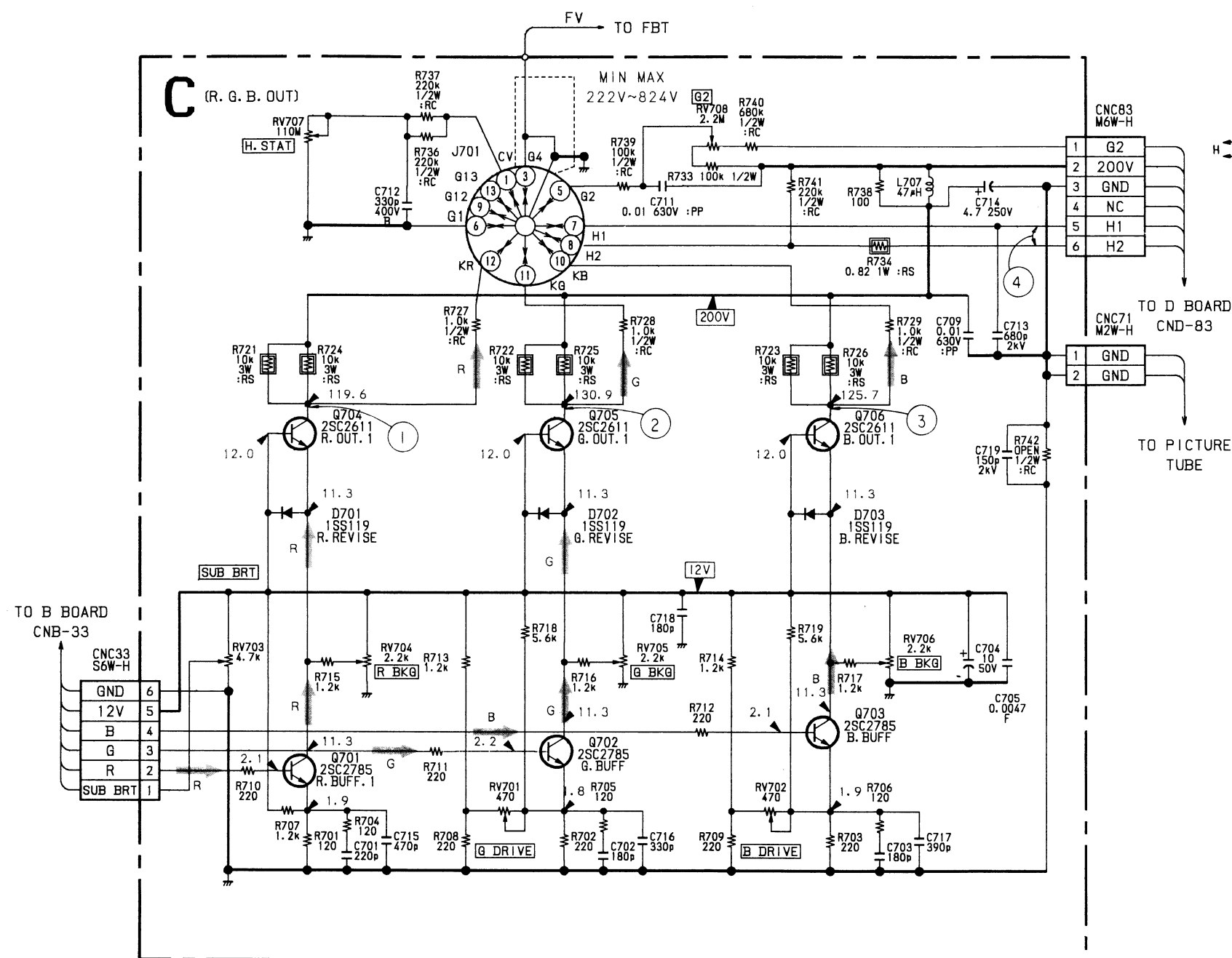
**SCHEMATIC DIAGRAM (8)**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
---	---	---	---	---	---	---	---	---	----	----	----	----	----

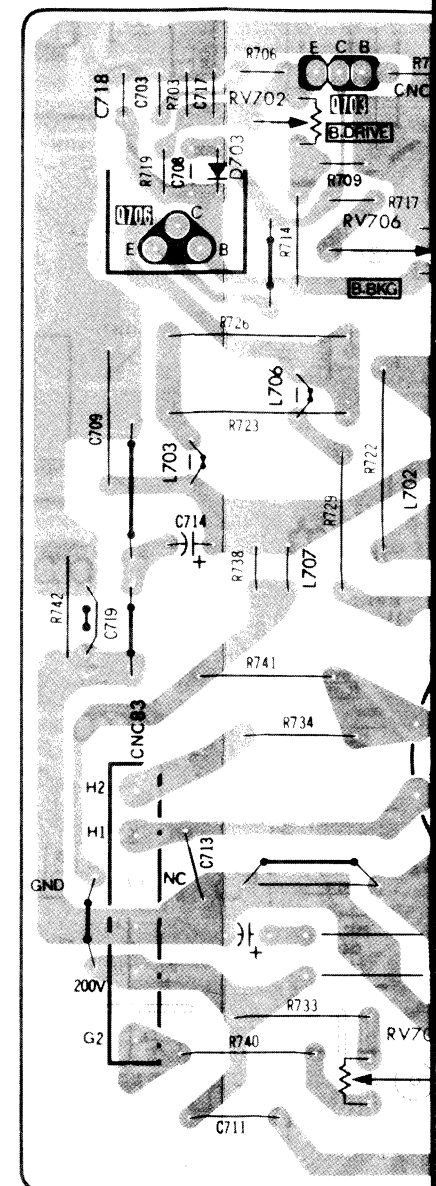
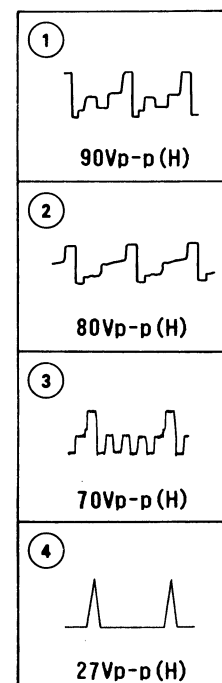
**C** [ R.

## PRINTED WIRING BOARDS (8)

**-C board-**



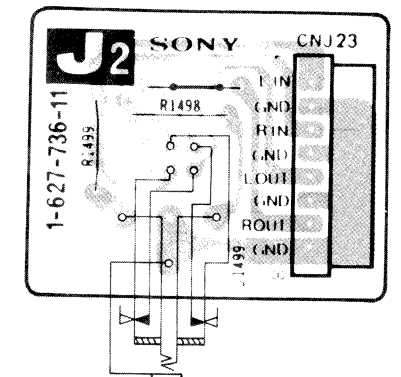
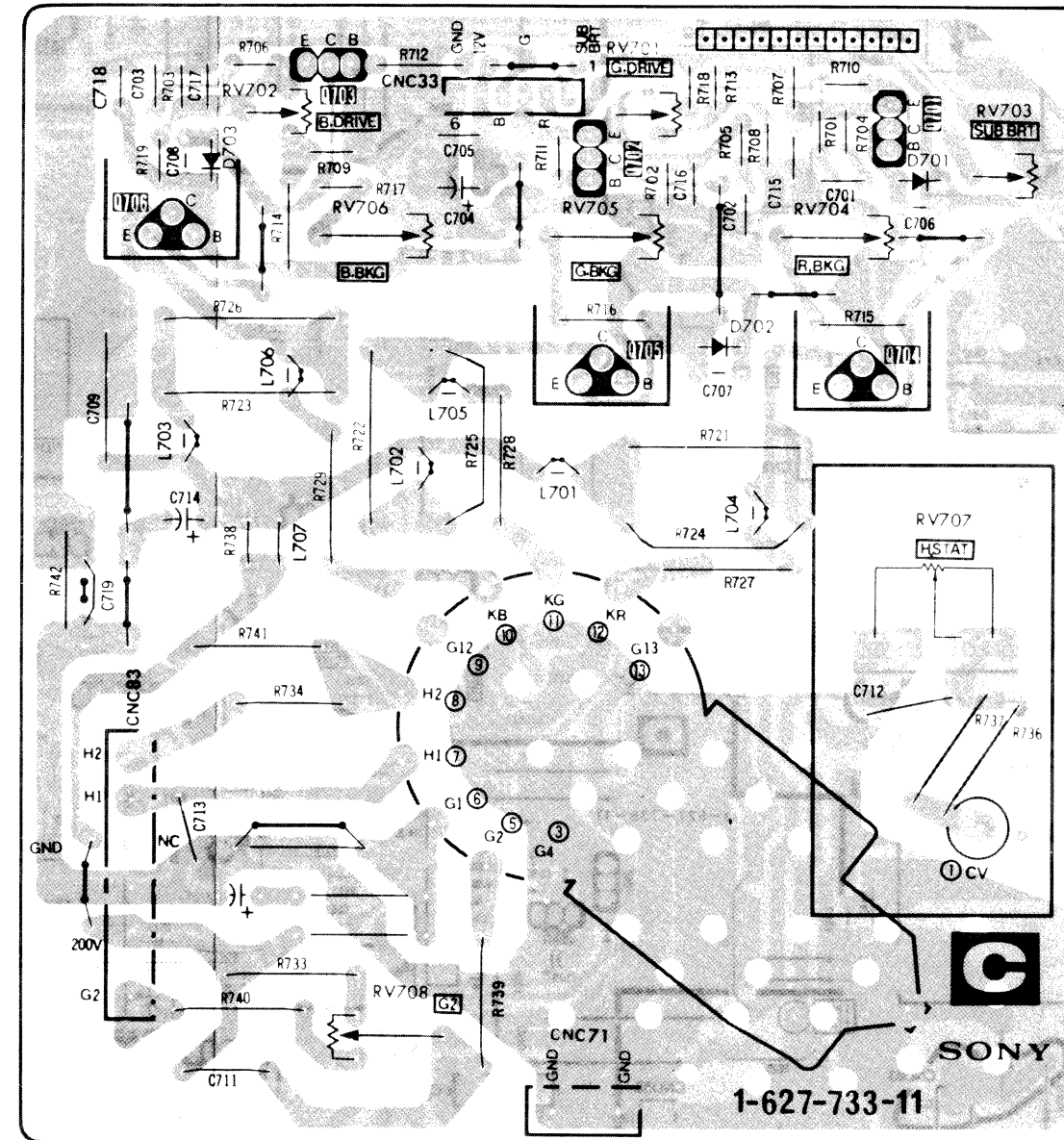
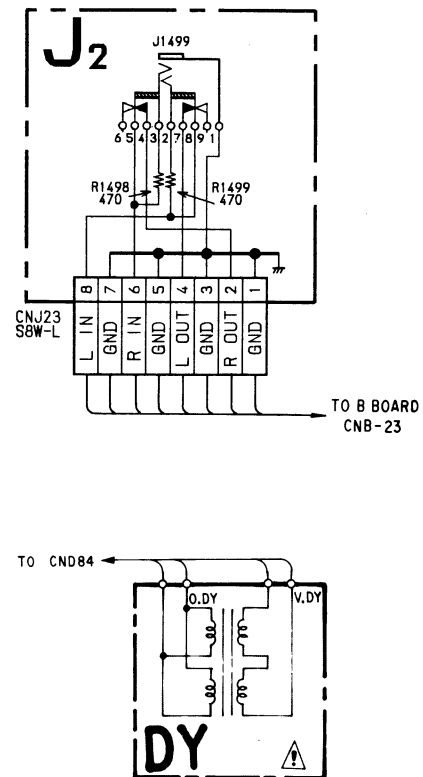
### ● C BOARD WAVEFORM



**J2**

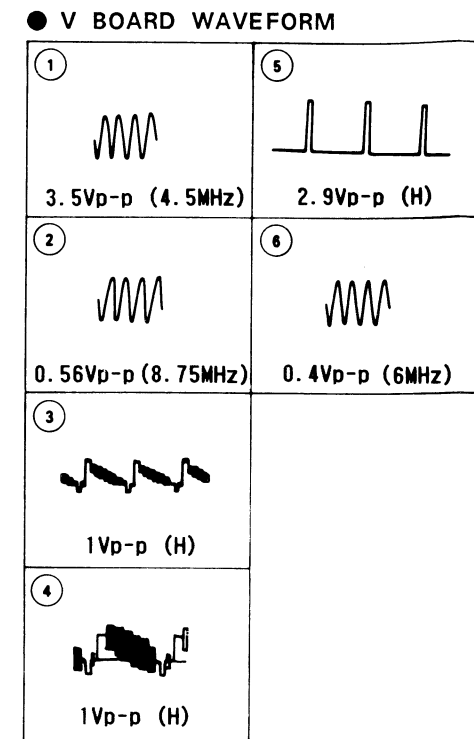
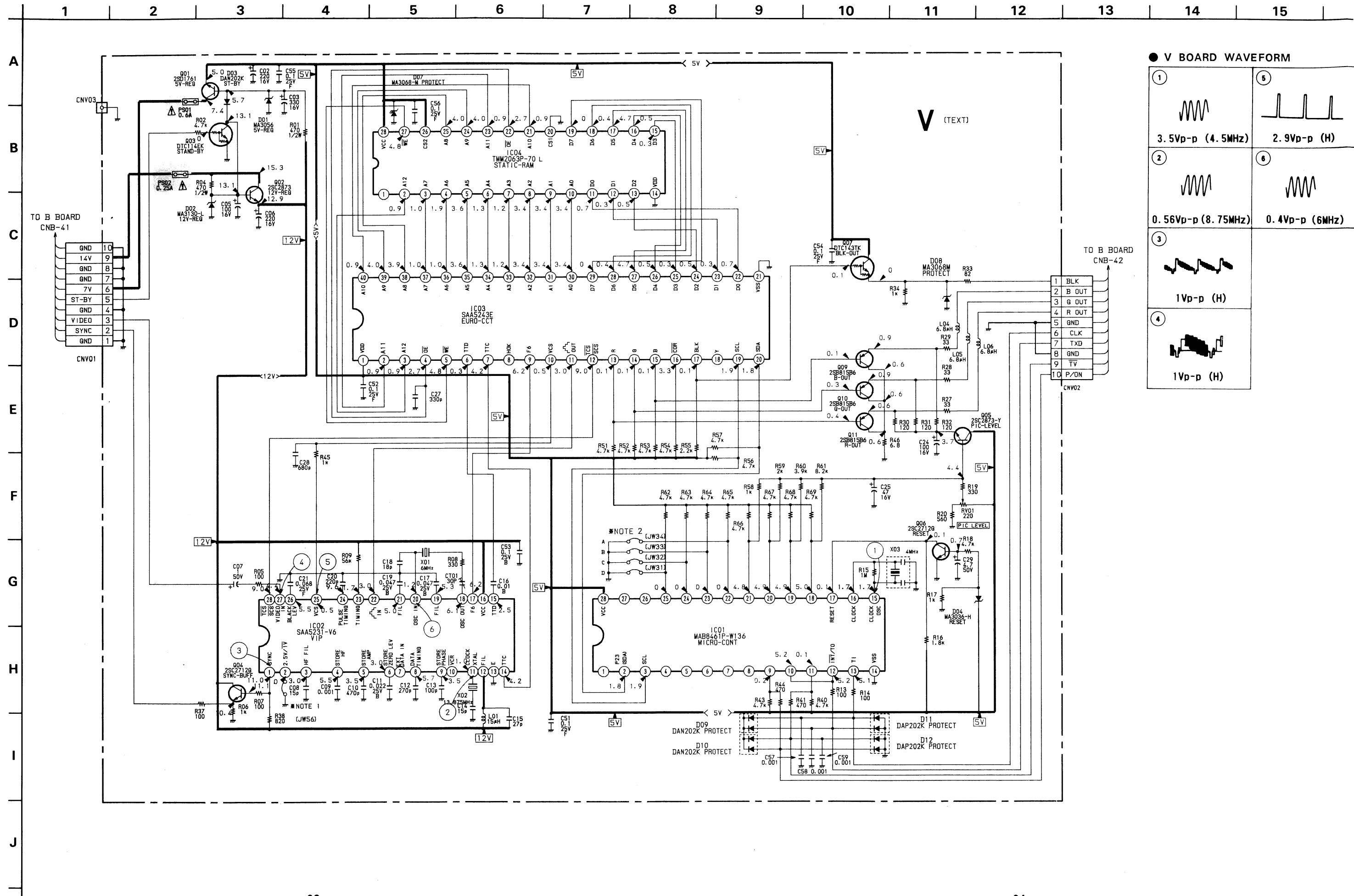
**-C board-**

**-J2 board-**

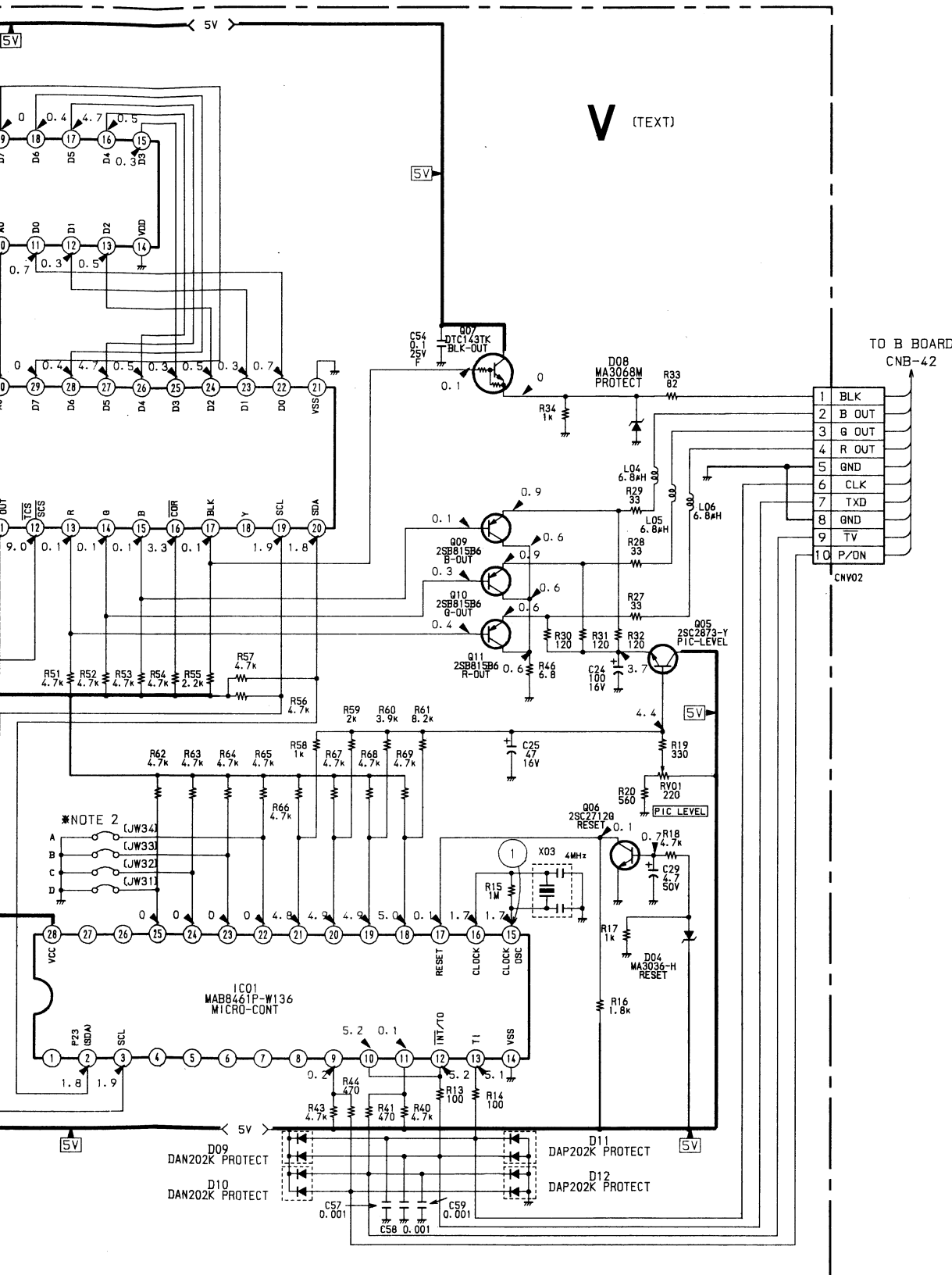




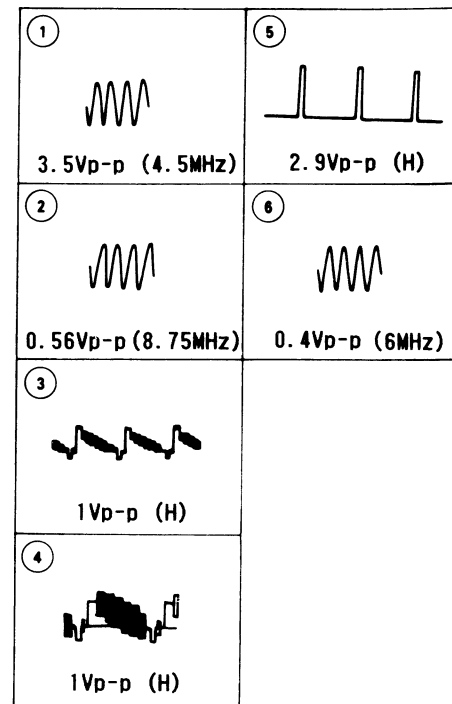
SCHEMATIC DIAGRAM (9)



7 8 9 10 11 12 13 14 15

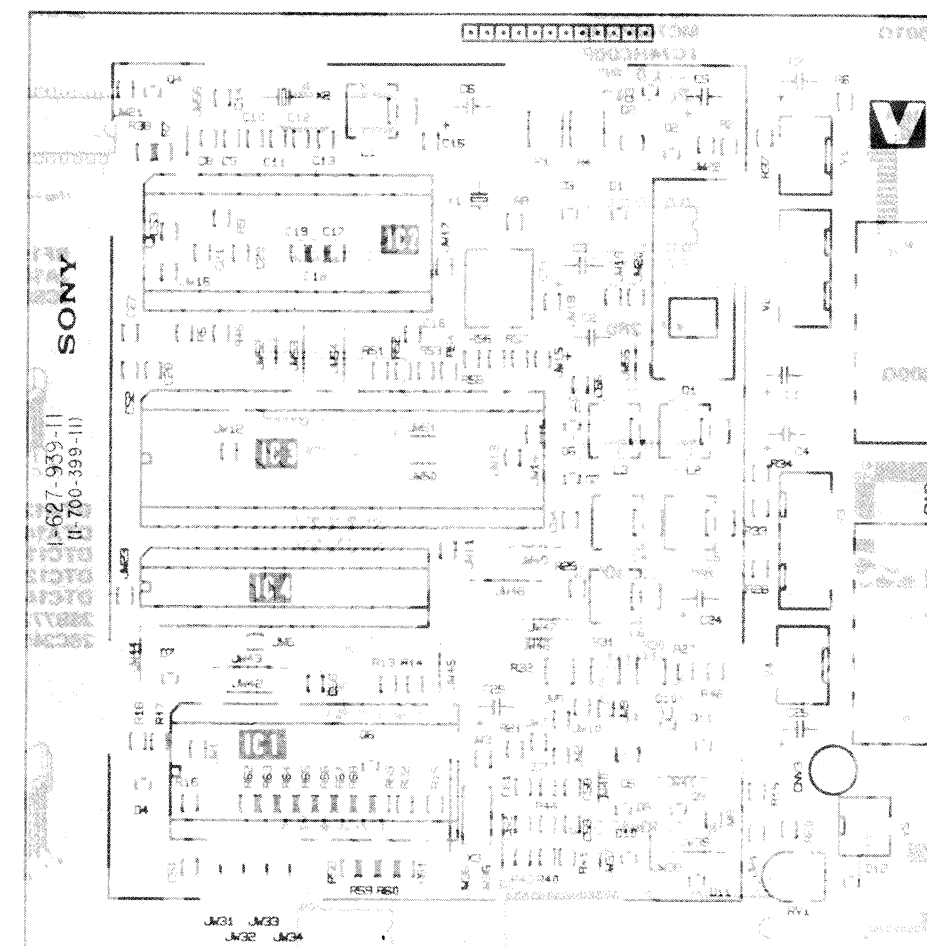


● V BOARD WAVEFORM



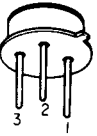
PRINTED WIRING BOARD (9)

-V board-

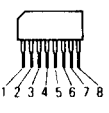


5-5. SEMICONDUCTORS

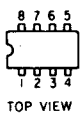
**BX1393**



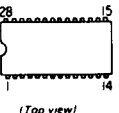
**CX20061**



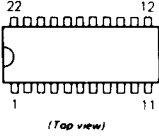
**CX23025**  
PCD8582  
TBA129  
TEA2014A  
TEA2031A  
μPC4558C



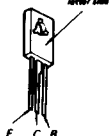
**CXA1096M**  
CXA1114P  
CXA1216P  
MAB8461P-W136  
SAA5231-V6  
TDA4555-V8  
TDA6200  
TMM2063P-70




**CXA1260Q**  
CXD2001Q



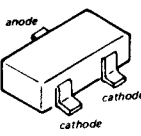
**CXD2000Q**




**CXK1206**



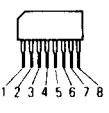
**DM-38**



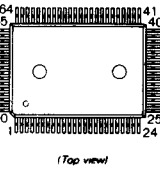
**HD14040BP**  
TC4052BP



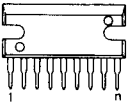
**HD14068BP**  
MC74HC74F  
TC74HC00P  
74AC04PC  
μPC1394C



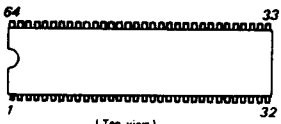
**LA4280**




**MC74HC4053F**




**M37100M8-003**



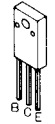
**NJM7809A**  
μPC7812H



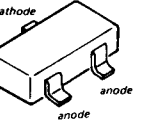
**NJM78L24A**



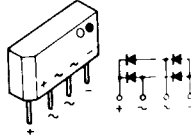
**SAA5243E**



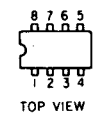
**SAB3036**  
TDA2595



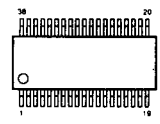
**SI-3052V**  
SI-3122V



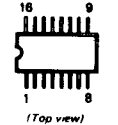
**TDA8443A**



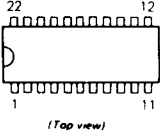
**TL431CLPB**




**μPC78L12**  
μPC78L12J




**μPC1377C**




**8F199**  
JA101  
JC501




**DTA124ES**  
DTA144ES  
DTC114ES  
DTC124ES  
DTC144ES  
2SB772  
2SC2458



**DTC114EK**  
DTC143TK  
2SB815  
2SC2712



**2SA1175**  
2SC2785



**2SA1220A**  
2SC2611  
2SC2688  
2SD882



**2SA1667**  
2SC4381  
2SD795E  
2SD1406



**2SB734**  
2SC2958  
2SD774



**2SC1761**



**2SC2060**  
2SD788



**2SC3996**



**2SC3298**



**2SK108**



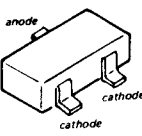
**1SS119**  
1SS133  
RD3.9ES-B3  
RD3.9ES-L1  
RD4.3ES-B2  
RD4.7ES-B3  
RD5.1ES-B2  
RD6.8ES-B2  
RD7.5ES-B3  
RD9.1ES-B3  
RD33ES-B3



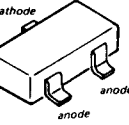
**1T33**



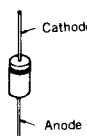
**DAN202K**



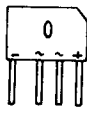
**DAP202K**



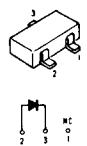
**ERD08-15**  
ERD28-06  
ES1F  
GP08D  
RGP01-17  
RGP10G  
RGP15G



**KBU4**



**MA3036H-TX**  
MA3056M-TX  
MA3068M-TX  
MA3130L-TX



**MC931**



**SIVB10S**



**V19E**  
V30N



**TLR124**



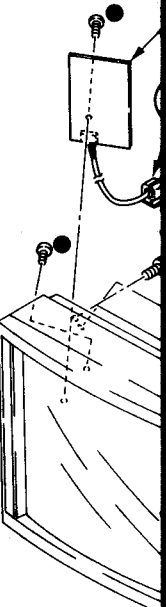
**TLUR144**



NOTE:  
• Items with no description are seldom required.  
• The construction part are indicated by number in the description.  
• Items marked with a triangle are service items. Some items are not available when ordering.

6-1. CHA

• BV  
□ BV



REF.NO. PART NO.

1	*A-1245
2	Δ 4-389
3	Δ 1-574
4	4-302
5	Δ 1-230
6	*1-627
7	Δ 1-439
8	*A-1345
9	3-701
10	Δ 1-238
11	4-386
12	*A-1296
13	Δ 1-465

SECTION 6  
EXPLODED VIEWS

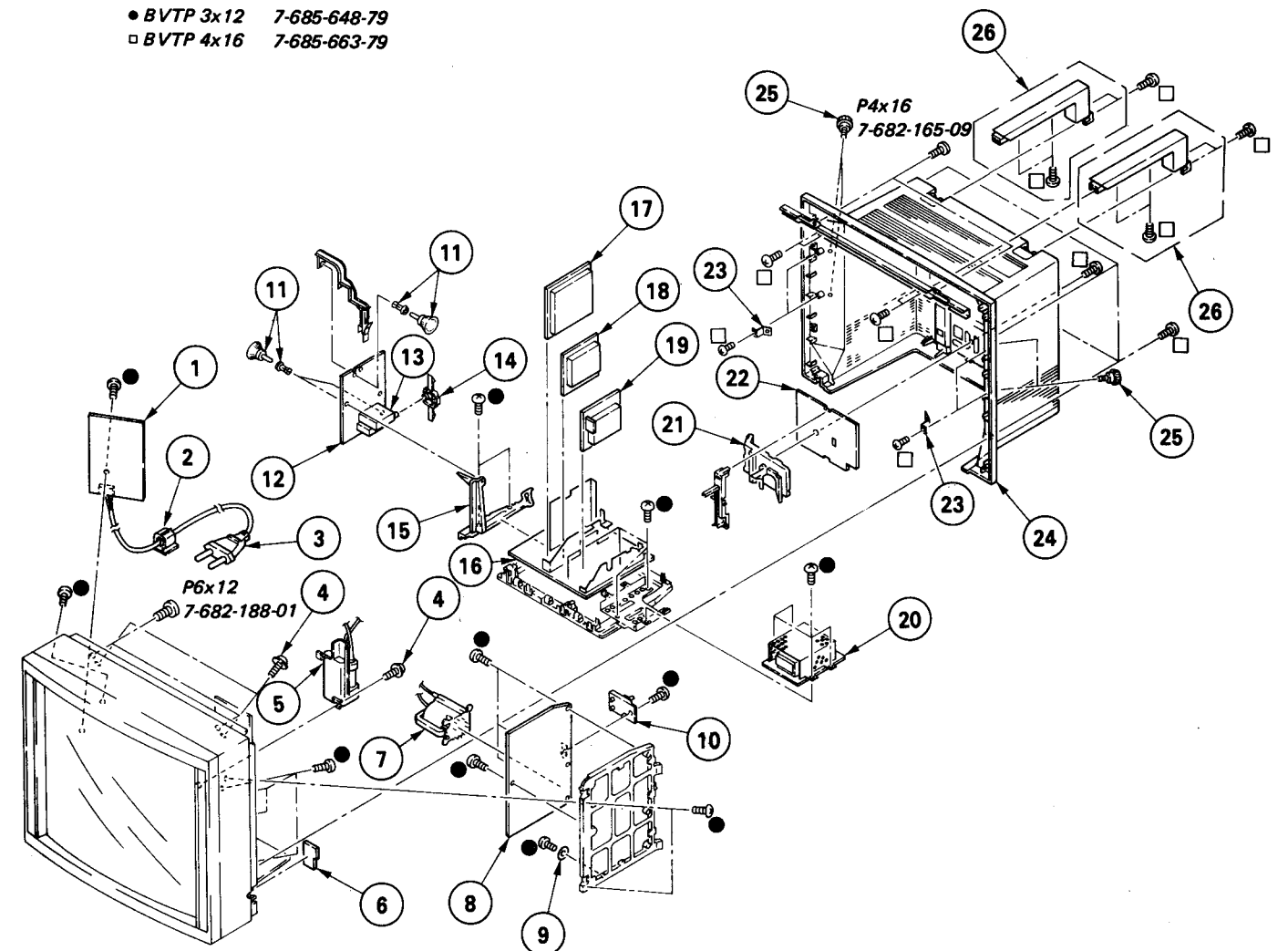
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

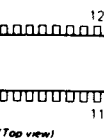
6-1. CHASSIS

- BVTP 3x12 7-685-648-79
- BVTP 4x16 7-685-663-79

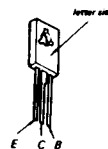


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*A-1245-436-A	F2 BOARD, COMPLETE		14	*4-386-617-01	HOLDER, TERMINAL	
2	$\Delta$ 4-389-201-01	HOLDER, AC CORD		15	*4-386-629-12	BRACKET, A	
3	$\Delta$ 1-574-299-11	CORD, POWER (WITH CONNECTOR)		16	*A-1135-521-A	B BOARD, COMPLETE	
4	4-302-934-00	HEAD, WASHER, TAPPING SCREW		17	*A-1275-093-A	Q BOARD, COMPLETE	
5	$\Delta$ 1-230-940-31	RESISTOR ASSY, HIGH-VOLTAGE		18	*A-1347-031-A	V BOARD, COMPLETE	
6	*1-627-736-11	J2 BOARD		19	*A-1135-526-A	B1 BOARD, COMPLETE	
7	$\Delta$ 1-439-443-11	TRANSFORMER ASSY, FLYBACK		20	1-413-380-11	REGULATOR, SWITCHING (ZD-109)	
8	*A-1345-798-A	D BOARD, COMPLETE		21	*4-386-624-11	BRACKET, J	
9	3-701-418-00	WASHER, SPECIAL		22	*A-1388-080-A	J1 BOARD, COMPLETE	
10	$\Delta$ 1-238-368-11	RESISTOR ASSY, HIGH-VOLTAGE		23	4-390-735-01	BRACKET, SPEAKER	
11	4-386-618-01	RIVET, T TYPE		24	4-390-723-01	COVER, REAR	
12	*A-1296-497-A	A BOARD, COMPLETE		25	X-4374-104-1	SCREW (B) ASSY, ORNAMENTAL	
13	$\Delta$ 1-465-059-11	TUNER, ET (UV-616S)		26	X-4390-706-1	HANDLE ASSY	

PC1377C



BF199  
JA101  
JC501

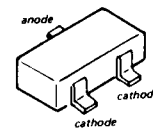


2SA1220A  
2SC2611  
2SC2688  
2SD882

2SC3996



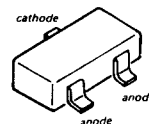
DAN202K



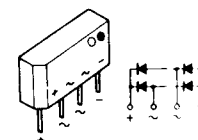
MC931



DAP202K

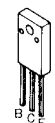


SIVB10S



2SA1667  
2SC4381  
2SD795E  
2SD1406

2SC3298



A124ES  
A144ES  
C114ES  
C124ES  
C144ES  
3772  
C2458

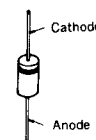


2SB734  
2SC2958  
2SD774

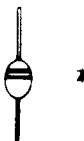
2SK108



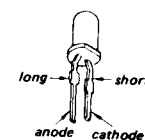
ERD08-15  
ERD28-06  
ES1F  
GP08D  
RGP01-17  
RGP10G  
RGP15G



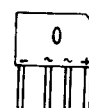
V19E  
V30N



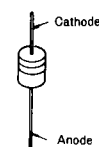
TLR124



KBU4



1SS119  
1SS133  
RD3.9ES-B3  
RD3.9ES-L1  
RD4.3ES-B2  
RD4.7ES-B3  
RD5.1ES-B2  
RD6.8ES-B2  
RD7.5ES-B3  
RD9.1ES-B3  
RD33ES-B3

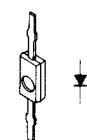


2SC1761



2SC2060  
2SD788

1T33



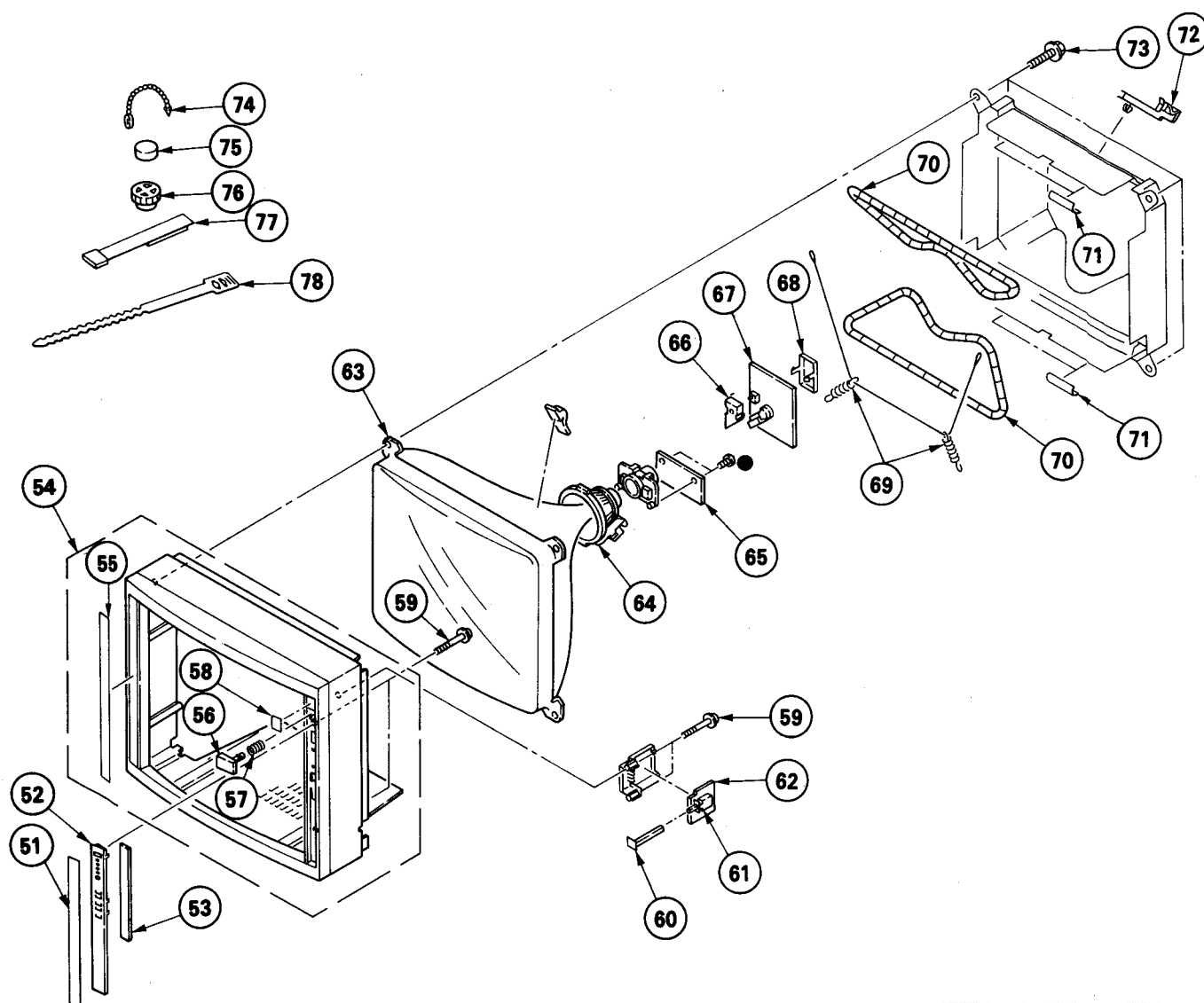
A1175  
C2785





## 6-2. PICTURE TUBE

• BVTP 3x12 7-685-648-79



The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	4-390-734-01	LABEL (B) (R)		65	*A-1342-071-A	VM BOARD, COMPLETE	
52	4-390-714-01	BRACKET, H PC BOARD		66	*4-379-167-01	COVER (MAIN), CV	
53	*1-627-728-11	H BOARD		67	*A-1330-901-A	C BOARD, COMPLETE	
54	X-4390-701-1	BEZNET ASSY	55-58	68	*4-379-160-01	COVER (REAR LID), CV	
55	4-390-733-01	LABEL (L)		69	4-369-318-00	SPRING, TENSION	
56	4-390-704-01	BUTTON, POWER		70	$\Delta$ 1-426-398-11	COIL, DEMAGNETIZATION	
57	3-666-528-00	SPRING, COMPRESSION		71	*4-860-518-11	PACKING, TWEETER	
58	4-390-732-01	LABEL (A) (R)		72	*4-387-216-01	HOLDER, LEAD	
59	4-319-520-11	SCREW, SPECIAL (+PW4X30)		73	4-373-263-11	SCREW (M), PT	
60	4-390-705-01	SHAFT, BUTTON		74	4-308-870-00	CLIP, LEAD WIRE	
61	$\Delta$ 1-571-433-11	SWITCH, PUSH (AC POWER)		75	1-452-032-00	MAGNET, DISK; 10MM $\phi$	
62	*1-627-734-11	F1 BOARD		76	1-452-094-00	MAGNET, ROTATABLE DISK; 15M $\phi$	
63	$\Delta$ 8-733-821-05	PICTURE TUBE (A68JYK10X)		77	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
64	$\Delta$ 1-451-333-11	DEFLECTION YOKE (SY-1918)		78	3-701-007-00	BAND, BINDING	

B

## NOTE:

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

SECTION 7  
ELECTRICAL PARTS LIST

• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

• All resistors are in ohms  
• F : nonflammable

When indicating parts by reference number, please include the board name.

## CAPACITORS

• MF :  $\mu$ F, PF :  $\mu$ F

## COILS

• MMH : mH, UH :  $\mu$ H

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1135-521-A B BOARD, COMPLETE *****				C346	1-136-153-00	MYLAR	0.01MF 10% 50V
<CAPACITOR>				C347	1-130-479-00	MYLAR	0.0047MF 10% 50V
C001	1-124-477-11	ELECT	47MF 20% 16V	C348	1-124-499-11	ELECT	1MF 20% 50V
C002	1-102-129-00	CERAMIC	0.01MF 10% 50V	C349	1-136-153-00	MYLAR	0.01MF 10% 50V
C003	1-102-824-00	CERAMIC	470PF 5% 50V	C350	1-124-927-11	ELECT	4.7MF 20% 50V
C004	1-124-477-11	ELECT	47MF 20% 16V	C351	1-124-499-11	ELECT	1MF 20% 50V
C005	1-102-951-00	CERAMIC	15PF 5% 50V	C352	1-124-927-11	ELECT	4.7MF 20% 50V
C006	1-102-947-00	CERAMIC	10PF 0.5PF 50V	C353	1-130-481-00	MYLAR	0.0068MF 10% 50V
C007	1-130-477-00	MYLAR	0.0033MF 10% 50V	C354	1-130-476-00	MYLAR	0.0027MF 10% 50V
C009	1-124-927-11	ELECT	4.7MF 20% 50V	C355	1-130-477-00	MYLAR	0.0033MF 10% 50V
C010	1-124-927-11	ELECT	4.7MF 20% 50V	C401	1-126-320-11	ELECT	10MF 20% 16V
C011	1-124-927-11	ELECT	4.7MF 20% 50V	C402	1-126-320-11	ELECT	10MF 20% 16V
C012	1-124-927-11	ELECT	4.7MF 20% 50V	C403	1-126-320-11	ELECT	10MF 20% 16V
C013	1-101-361-00	CERAMIC	150PF 5% 50V	C404	1-124-477-11	ELECT	47MF 20% 16V
C014	1-136-165-00	FILM	0.1MF 5% 50V	C406	1-136-165-00	FILM	0.1MF 5% 50V
C015	1-136-165-00	FILM	0.1MF 5% 50V	C407	1-136-165-00	FILM	0.1MF 5% 50V
C016	1-102-980-00	CERAMIC	270PF 5% 50V	C408	1-136-165-00	FILM	0.1MF 5% 50V
C017	1-124-360-00	ELECT	1000MF 20% 16V	C409	1-123-875-11	ELECT	10MF 20% 50V
C018	1-124-478-11	ELECT	100MF 20% 25V	C410	1-124-477-11	ELECT	47MF 20% 16V
C019	1-124-477-11	ELECT	47MF 20% 16V	C415	1-136-165-00	FILM	0.1MF 5% 50V
C021	1-124-360-00	ELECT	1000MF 20% 16V	C416	1-136-165-00	FILM	0.1MF 5% 50V
C022	1-124-927-11	ELECT	4.7MF 20% 50V	C417	1-136-165-00	FILM	0.1MF 5% 50V
C027	1-123-875-11	ELECT	10MF 20% 50V	C418	1-124-463-00	ELECT	0.1MF 20% 50V
C028	1-101-004-00	CERAMIC	0.01MF 50V	C419	1-124-477-11	ELECT	47MF 20% 16V
C029	1-130-477-00	MYLAR	0.0033MF 10% 50V	C420	1-126-101-11	ELECT	100MF 20% 16V
C030	1-102-111-00	CERAMIC	270PF 10% 50V	C421	1-102-953-00	CERAMIC	18PF 5% 50V
C031	1-123-875-11	ELECT	10MF 20% 50V	C422	1-123-875-11	ELECT	10MF 20% 50V
C045	1-124-463-00	ELECT	0.1MF 20% 50V	C423	1-124-477-11	ELECT	47MF 20% 16V
C251	1-102-074-00	CERAMIC	0.001MF 10% 50V	C424	1-124-477-11	ELECT	47MF 20% 16V
C252	1-124-927-11	ELECT	4.7MF 20% 50V	C427	1-123-875-11	ELECT	10MF 20% 50V
C253	1-124-910-11	ELECT	47MF 20% 50V	C432	1-123-875-11	ELECT	10MF 20% 50V
C254	1-136-165-00	FILM	0.1MF 5% 50V	C434	1-124-477-11	ELECT	47MF 20% 16V
C255	1-126-105-11	ELECT	1000MF 20% 35V	C435	1-124-477-11	ELECT	47MF 20% 16V
C256	1-136-167-00	FILM	0.15MF 5% 50V	C4001	1-123-875-11	ELECT	10MF 20% 50V
C261	1-102-074-00	CERAMIC	0.001MF 10% 50V	C4002	1-126-101-11	ELECT	100MF 20% 16V
C262	1-124-927-11	ELECT	4.7MF 20% 50V	C4003	1-124-902-00	ELECT	0.47MF 20% 50V
C263	1-124-910-11	ELECT	47MF 20% 50V	C4004	1-124-902-00	ELECT	0.47MF 20% 50V
C264	1-136-165-00	FILM	0.1MF 5% 50V	C4005	1-124-902-00	ELECT	0.47MF 20% 50V
C265	1-126-105-11	ELECT	1000MF 20% 35V	C4006	1-124-464-11	ELECT	0.22MF 20% 50V
C266	1-136-167-00	FILM	0.15MF 5% 50V	C4007	1-124-464-11	ELECT	0.22MF 20% 50V
C271	1-124-122-11	ELECT	100MF 20% 50V	C4008	1-124-464-11	ELECT	0.22MF 20% 50V
C272	1-124-913-11	ELECT	470MF 20% 50V	C4009	1-102-816-00	CERAMIC	120PF 5% 50V
C273	1-136-165-00	FILM	0.1MF 5% 50V	C4010	1-102-959-00	CERAMIC	22PF 5% 50V
C340	1-124-477-11	ELECT	47MF 20% 16V	C4011	1-126-233-11	ELECT	22MF 20% 50V
C341	1-136-157-00	MYLAR	0.022MF 10% 50V	C4012	1-136-165-00	FILM	0.1MF 5% 50V
C342	1-130-471-00	MYLAR	0.001MF 10% 50V	C4013	1-101-884-00	CERAMIC	56PF 5% 50V
C344	1-130-471-00	MYLAR	0.001MF 10% 50V	C4014	1-136-153-00	MYLAR	0.01MF 10% 50V
C345	1-136-169-00	FILM	0.22MF 5% 50V	C4015	1-102-978-00	CERAMIC	220PF 5% 50V
				C4016	1-123-875-11	ELECT	10MF 20% 50V
				C4017	1-101-004-00	CERAMIC	0.01MF 50V
				C4018	1-124-499-11	ELECT	1MF 20% 50V

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

**KV-FX29TD**  
RM-681

**B**

REF.NO.	PART NO.	DESCRIPTION	REMARK
C4019	1-101-004-00	CERAMIC 0.01MF	50V
C4020	1-123-875-11	ELECT 10MF 20%	50V
C4021	1-124-477-11	ELECT 47MF 20%	16V
C4022	1-124-499-11	ELECT 1MF 20%	50V
C4023	1-102-112-00	CERAMIC 330PF 10%	50V
C4024	1-126-101-11	ELECT 100MF 20%	16V
C4030	1-124-499-11	ELECT 1MF 20%	50V
C4031	1-124-499-11	ELECT 1MF 20%	50V
C4032	1-124-499-11	ELECT 1MF 20%	50V

<FILTER>

CF001 1-567-686-11 OSCILLATOR, CERAMIC

<CONNECTOR>

CNB01	*1-564-511-11	PLUG, CONNECTOR 8P
CNB02	*1-564-508-11	PLUG, CONNECTOR 5P
CNB03	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)
CNB11	*1-566-660-11	CONNECTOR, HINGE (PLUG) 18P
CNB13	*1-564-881-11	PLUG, CONNECTOR 4P
CNB21	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)
CNB23	*1-564-511-11	PLUG, CONNECTOR 8P
CNB31	*1-565-501-11	CONNECTOR, BOARD TO BOARD 10P
CNB32	*1-565-501-11	CONNECTOR, BOARD TO BOARD 10P
CNB33	*1-564-509-11	PLUG, CONNECTOR 6P
CNB41	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
CNB42	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
CNB43	*1-565-509-11	CONNECTOR, BOARD TO BOARD 18P
CNB44	*1-565-509-11	CONNECTOR, BOARD TO BOARD 18P
CNB60	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P
CNB62	*1-564-507-11	PLUG, CONNECTOR 4P
CNB63	*1-564-509-11	PLUG, CONNECTOR 6P
CNB81	*1-564-513-11	PLUG, CONNECTOR 10P
CNB83	*1-564-506-11	PLUG, CONNECTOR 3P
CNB89	*1-564-882-11	PLUG, CONNECTOR 5P

<DIODE>

D001	8-719-120-17	DIODE RD3.9ES-L1
D002	8-719-911-19	DIODE 1SS119
D003	8-719-911-19	DIODE 1SS119
D004	8-719-911-19	DIODE 1SS119
D005	8-719-911-19	DIODE 1SS119
D006	8-719-911-19	DIODE 1SS119
D007	8-719-110-80	DIODE RD33ES-B4
D008	8-719-911-19	DIODE 1SS119
D009	8-719-911-19	DIODE 1SS119
D011	8-719-911-19	DIODE 1SS119
D012	8-719-911-19	DIODE 1SS119
D271	8-719-110-14	DIODE RD9.1ES-B3
D341	8-719-911-19	DIODE 1SS119
D342	8-719-911-19	DIODE 1SS119
D344	8-719-120-14	DIODE RD3.9ES-L1
D347	8-719-911-19	DIODE 1SS119
D348	8-719-911-19	DIODE 1SS119
D371	8-719-936-83	DIODE GP08DPKG23
D381	8-719-911-19	DIODE 1SS119
D401	8-719-110-04	DIODE RD7.5ES-B3
D402	8-719-110-04	DIODE RD7.5ES-B3
D403	8-719-110-04	DIODE RD7.5ES-B3
D404	8-719-911-19	DIODE 1SS119
D405	8-719-911-19	DIODE 1SS119
D406	8-719-911-19	DIODE 1SS119

REF.NO.	PART NO.	DESCRIPTION	REMARK
D407	8-719-109-81	DIODE RD4.7ES-B2	
D408	8-719-911-19	DIODE 1SS119	
D411	8-719-911-19	DIODE 1SS119	
D412	8-719-911-19	DIODE 1SS119	
D413	8-719-911-19	DIODE 1SS119	
D415	8-719-911-19	DIODE 1SS119	
D416	8-719-911-19	DIODE 1SS119	
D417	8-719-911-19	DIODE 1SS119	
D4001	8-719-911-19	DIODE 1SS119	
D4002	8-719-911-19	DIODE 1SS119	
D4003	8-719-911-19	DIODE 1SS119	
D4029	8-719-911-19	DIODE 1SS119	
D4030	8-719-911-19	DIODE 1SS119	

<IC>

IC001	8-759-631-93	IC M37100M8-617SP
IC002	8-759-972-43	IC PCD8582
IC003	8-759-972-43	IC PCD8582
IC004	8-759-202-11	IC TC74HC00P
IC005	8-749-931-22	IC SI-3122V
	4-363-414-00	SPACER, MICA; IC005
	*4-391-704-01	HOLDER (A), TR; IC005
IC251	8-759-803-31	IC LA4280
	*4-368-683-01	SPRING; IC521
IC341	8-759-946-99	IC TDA2595-V7
IC381	8-759-240-40	IC HD14040BP
IC402	8-759-978-62	IC TDA8443A
IC403	8-759-140-66	IC HD14066BP
IC404	8-759-909-70	IC CX23025
IC4002	8-752-034-85	IC CXA1216P
IC4003	8-759-701-00	IC NJM7809A

<COIL>

L001	1-410-478-11	INDUCTOR 47UH
L002	1-410-471-11	INDUCTOR 12UH
L003	1-408-225-00	INDUCTOR 3.3UH
L027	1-410-478-11	INDUCTOR 47UH
L4001	1-408-411-00	INDUCTOR 15UH

<IC LINK>

PS001A 1-532-637-91 LINK, IC

<TRANSISTOR>

Q001	8-729-117-54	TRANSISTOR 2SA1175
Q002	8-729-178-54	TRANSISTOR 2SC2785
Q003	8-729-117-54	TRANSISTOR 2SA1175
Q004	8-729-117-54	TRANSISTOR 2SA1175
Q005	8-729-900-65	TRANSISTOR DTA144ES
Q271	8-729-900-36	TRANSISTOR DTC124ES
Q340	8-729-178-54	TRANSISTOR 2SC2785
Q341	8-729-178-54	TRANSISTOR 2SC2785
Q342	8-729-178-54	TRANSISTOR 2SC2785
Q343	8-729-178-54	TRANSISTOR 2SC2785
Q344	8-729-178-54	TRANSISTOR 2SC2785
Q345	8-729-178-54	TRANSISTOR 2SC2785
Q380	8-729-178-54	TRANSISTOR 2SC2785
Q381	8-729-178-54	TRANSISTOR 2SC2785
Q382	8-729-900-89	TRANSISTOR DTC144ES
Q383	8-729-900-89	TRANSISTOR DTC144ES
Q401	8-729-178-54	TRANSISTOR 2SC2785

B

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q402	8-729-178-54	TRANSISTOR 2SC2785		R031	1-249-429-11	CARBON 10K 5%	1/4W
Q403	8-729-178-54	TRANSISTOR 2SC2785		R032	1-249-429-11	CARBON 10K 5%	1/4W
Q404	8-729-178-54	TRANSISTOR 2SC2785		R033	1-249-429-11	CARBON 10K 5%	1/4W
Q405	8-729-178-54	TRANSISTOR 2SC2785		R037	1-249-417-11	CARBON 1K 5%	1/4W
Q406	8-729-178-54	TRANSISTOR 2SC2785		R038	1-249-417-11	CARBON 1K 5%	1/4W
Q407	8-729-178-54	TRANSISTOR 2SC2785		R039	1-249-417-11	CARBON 1K 5%	1/4W
Q408	8-729-117-54	TRANSISTOR 2SA1175		R040	1-249-417-11	CARBON 1K 5%	1/4W
Q409	8-729-178-54	TRANSISTOR 2SC2785		R041	1-249-417-11	CARBON 1K 5%	1/4W
Q410	8-729-178-54	TRANSISTOR 2SC2785		R042	1-249-417-11	CARBON 1K 5%	1/4W
Q411	8-729-178-54	TRANSISTOR 2SC2785		R043	1-249-413-11	CARBON 470 5%	1/4W
Q412	8-729-178-54	TRANSISTOR 2SC2785		R044	1-249-413-11	CARBON 470 5%	1/4W
Q415	8-729-178-54	TRANSISTOR 2SC2785		R045	1-249-411-11	CARBON 330 5%	1/4W
Q418	8-729-178-54	TRANSISTOR 2SC2785		R046	1-249-429-11	CARBON 10K 5%	1/4W
Q419	8-729-117-54	TRANSISTOR 2SA1175		R047	1-249-429-11	CARBON 10K 5%	1/4W
Q420	8-729-178-54	TRANSISTOR 2SC2785		R048	1-249-429-11	CARBON 10K 5%	1/4W
Q421	8-729-117-54	TRANSISTOR 2SA1175		R049	1-249-429-11	CARBON 10K 5%	1/4W
Q422	8-729-178-54	TRANSISTOR 2SC2785		R050	1-249-429-11	CARBON 10K 5%	1/4W
Q423	8-729-117-54	TRANSISTOR 2SA1175		R051	1-249-429-11	CARBON 10K 5%	1/4W
Q424	8-729-178-54	TRANSISTOR 2SC2785		R052	1-249-429-11	CARBON 10K 5%	1/4W
Q425	8-729-178-54	TRANSISTOR 2SC2785		R053	1-249-429-11	CARBON 10K 5%	1/4W
Q431	8-729-178-54	TRANSISTOR 2SC2785		R054	1-249-413-11	CARBON 470 5%	1/4W
Q4001	8-729-178-54	TRANSISTOR 2SC2785		R055	1-249-413-11	CARBON 470 5%	1/4W
Q4004	8-729-117-54	TRANSISTOR 2SA1175		R056	1-249-429-11	CARBON 10K 5%	1/4W
Q4005	8-729-178-54	TRANSISTOR 2SC2785		R057	1-249-429-11	CARBON 10K 5%	1/4W
Q4006	8-729-178-54	TRANSISTOR 2SC2785		R058	1-249-429-11	CARBON 10K 5%	1/4W
Q4007	8-729-178-54	TRANSISTOR 2SC2785		R059	1-249-417-11	CARBON 1K 5%	1/4W
Q4008	8-729-178-54	TRANSISTOR 2SC2785		R060	1-249-417-11	CARBON 1K 5%	1/4W
Q4009	8-729-178-54	TRANSISTOR 2SC2785		R061	1-249-413-11	CARBON 470 5%	1/4W
Q4011	8-729-600-12	TRANSISTOR 2SK108		R062	1-249-423-11	CARBON 3.3K 5%	1/4W
Q4019	8-729-178-54	TRANSISTOR 2SC2785		R063	1-249-435-11	CARBON 33K 5%	1/4W
Q4024	8-729-600-12	TRANSISTOR 2SK108		R064	1-249-441-11	CARBON 100K 5%	1/4W
Q4027	8-729-117-54	TRANSISTOR 2SA1175		R065	1-249-425-11	CARBON 4.7K 5%	1/4W
Q4028	8-729-178-54	TRANSISTOR 2SC2785		R066	1-249-425-11	CARBON 4.7K 5%	1/4W
Q4029	8-729-178-54	TRANSISTOR 2SC2785		R067	1-249-425-11	CARBON 4.7K 5%	1/4W
Q4033	8-729-900-36	TRANSISTOR DTC124ES		R068	1-249-431-11	CARBON 15K 5%	1/4W
Q4045	8-729-900-63	TRANSISTOR DTA124ES		R069	1-249-429-11	CARBON 10K 5%	1/4W
<RESISTOR>				R070	1-249-421-11	CARBON 2.2K 5%	1/4W
R001	1-249-413-11	CARBON 470 5%	1/4W	R071	1-249-413-11	CARBON 470 5%	1/4W
R002	1-249-431-11	CARBON 15K 5%	1/4W	R072	1-249-413-11	CARBON 470 5%	1/4W
R003	1-249-425-11	CARBON 4.7K 5%	1/4W	R073	1-249-417-11	CARBON 1K 5%	1/4W
R005	1-249-429-11	CARBON 10K 5%	1/4W	R074	1-249-427-11	CARBON 6.8K 5%	1/4W
R007	1-249-429-11	CARBON 10K 5%	1/4W	R076	1-249-437-11	CARBON 47K 5%	1/4W
R008	1-249-429-11	CARBON 10K 5%	1/4W	R077	1-249-437-11	CARBON 47K 5%	1/4W
R009	1-249-429-11	CARBON 10K 5%	1/4W	R078	1-249-437-11	CARBON 47K 5%	1/4W
R010	1-249-429-11	CARBON 10K 5%	1/4W	R079	1-249-429-11	CARBON 10K 5%	1/4W
R011	1-249-429-11	CARBON 10K 5%	1/4W	R082	1-249-429-11	CARBON 10K 5%	1/4W
R012	1-249-429-11	CARBON 10K 5%	1/4W	R083	1-249-417-11	CARBON 1K 5%	1/4W
R013	1-249-429-11	CARBON 10K 5%	1/4W	R084	1-249-429-11	CARBON 10K 5%	1/4W
R014	1-249-429-11	CARBON 10K 5%	1/4W	R251	1-249-419-11	CARBON 1.5K 5%	1/4W
R015	1-249-425-11	CARBON 4.7K 5%	1/4W	R252	1-249-423-11	CARBON 3.3K 5%	1/4W
R016	1-249-417-11	CARBON 1K 5%	1/4W	R253	1-249-405-11	CARBON 100 5%	1/4W
R017	1-249-419-11	CARBON 1.5K 5%	1/4W	R254	1-249-385-11	CARBON 2.2 5%	1/4W F
R019	1-249-432-11	CARBON 18K 5%	1/4W	R261	1-249-419-11	CARBON 1.5K 5%	1/4W
R020	1-249-439-11	CARBON 68K 5%	1/4W	R262	1-249-423-11	CARBON 3.3K 5%	1/4W
R021	1-249-429-11	CARBON 10K 5%	1/4W	R263	1-249-405-11	CARBON 100 5%	1/4W
R022	1-249-429-11	CARBON 10K 5%	1/4W	R264	1-249-385-11	CARBON 2.2 5%	1/4W F
R023	1-249-429-11	CARBON 10K 5%	1/4W	R271	1-249-413-11	CARBON 470 5%	1/4W
R024	1-249-438-11	CARBON 56K 5%	1/4W	R272	1-249-429-11	CARBON 10K 5%	1/4W
R025	1-249-429-11	CARBON 10K 5%	1/4W	R273	1-249-417-11	CARBON 1K 5%	1/4W
R026	1-249-429-11	CARBON 10K 5%	1/4W	R340	1-249-431-11	CARBON 15K 5%	1/4W
R029	1-249-429-11	CARBON 10K 5%	1/4W	R341	1-249-425-11	CARBON 4.7K 5%	1/4W
R030	1-249-431-11	CARBON 15K 5%	1/4W	R342	1-247-891-00	CARBON 330K 5%	1/4W
				R343	1-249-417-11	CARBON 1K 5%	1/4W

B

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R344	1-249-425-11	CARBON	4.7K 5% 1/4W	R433	1-249-411-11	CARBON	330 5% 1/4W
R345	1-249-429-11	CARBON	10K 5% 1/4W	R434	1-249-409-11	CARBON	220 5% 1/4W
R346	1-249-425-11	CARBON	4.7K 5% 1/4W	R437	1-249-429-11	CARBON	10K 5% 1/4W
R347	1-249-417-11	CARBON	1K 5% 1/4W	R438	1-249-427-11	CARBON	6.8K 5% 1/4W
R348	1-249-437-11	CARBON	47K 5% 1/4W	R439	1-249-413-11	CARBON	470 5% 1/4W
R349	1-249-429-11	CARBON	10K 5% 1/4W	R440	1-249-409-11	CARBON	220 5% 1/4W
R350	1-249-433-11	CARBON	22K 5% 1/4W	R441	1-249-417-11	CARBON	1K 5% 1/4W
R351	1-249-423-11	CARBON	3.3K 5% 1/4W	R442	1-249-417-11	CARBON	1K 5% 1/4W
R352	1-247-883-00	CARBON	150K 5% 1/4W	R443	1-249-417-11	CARBON	1K 5% 1/4W
R353	1-249-416-11	CARBON	820 5% 1/4W	R444	1-249-429-11	CARBON	10K 5% 1/4W
R354	1-249-415-11	CARBON	680 5% 1/4W	R445	1-249-427-11	CARBON	6.8K 5% 1/4W
R355	1-249-437-11	CARBON	47K 5% 1/4W	R446	1-249-417-11	CARBON	1K 5% 1/4W
R356	1-249-441-11	CARBON	100K 5% 1/4W	R453	1-249-413-11	CARBON	470 5% 1/4W
R357	1-247-881-00	CARBON	120K 5% 1/4W	R456	1-249-417-11	CARBON	1K 5% 1/4W
R358	1-249-430-11	CARBON	12K 5% 1/4W	R460	1-249-413-11	CARBON	470 5% 1/4W
R360	1-249-425-11	CARBON	4.7K 5% 1/4W	R461	1-249-413-11	CARBON	470 5% 1/4W
R361	1-249-423-11	CARBON	3.3K 5% 1/4W	R462	1-249-413-11	CARBON	470 5% 1/4W
R362	1-249-433-11	CARBON	22K 5% 1/4W	R463	1-249-413-11	CARBON	470 5% 1/4W
R363	1-249-433-11	CARBON	22K 5% 1/4W	R466	1-249-417-11	CARBON	1K 5% 1/4W
R364	1-249-418-11	CARBON	1.2K 5% 1/4W	R467	1-249-425-11	CARBON	4.7K 5% 1/4W
R365	1-249-425-11	CARBON	4.7K 5% 1/4W	R468	1-249-415-11	CARBON	680 5% 1/4W
R366	1-249-417-11	CARBON	1K 5% 1/4W	R470	1-249-425-11	CARBON	4.7K 5% 1/4W
R367	1-249-421-11	CARBON	2.2K 5% 1/4W	R471	1-249-415-11	CARBON	680 5% 1/4W
R368	1-249-429-11	CARBON	10K 5% 1/4W	R473	1-249-425-11	CARBON	4.7K 5% 1/4W
R369	1-249-425-11	CARBON	4.7K 5% 1/4W	R474	1-249-415-11	CARBON	680 5% 1/4W
R370	1-249-413-11	CARBON	470 5% 1/4W	R476	1-249-417-11	CARBON	1K 5% 1/4W
R371	1-249-405-11	CARBON	100 5% 1/4W	R477	1-249-441-11	CARBON	100K 5% 1/4W
R372	1-249-405-11	CARBON	100 5% 1/4W	R478	1-249-429-11	CARBON	10K 5% 1/4W
R373	1-249-417-11	CARBON	1K 5% 1/4W	R479	1-249-429-11	CARBON	10K 5% 1/4W
R374	1-249-431-11	CARBON	15K 5% 1/4W	R480	1-249-429-11	CARBON	10K 5% 1/4W
R375	1-249-435-11	CARBON	33K 5% 1/4W	R481	1-249-407-11	CARBON	150 5% 1/4W
R376	1-249-419-11	CARBON	1.5K 5% 1/4W	R482	1-249-417-11	CARBON	1K 5% 1/4W
R377	1-249-421-11	CARBON	2.2K 5% 1/4W	R483	1-249-417-11	CARBON	1K 5% 1/4W
R378	1-249-422-11	CARBON	2.7K 5% 1/4W	R484	1-249-433-11	CARBON	22K 5% 1/4W
R381	1-249-429-11	CARBON	10K 5% 1/4W	R489	1-247-891-00	CARBON	330K 5% 1/4W
R404	1-249-429-11	CARBON	10K 5% 1/4W	R490	1-247-891-00	CARBON	330K 5% 1/4W
R405	1-249-429-11	CARBON	10K 5% 1/4W	R491	1-249-417-11	CARBON	1K 5% 1/4W
R406	1-249-417-11	CARBON	1K 5% 1/4W	R4001	1-249-436-11	CARBON	39K 5% 1/4W
R407	1-249-429-11	CARBON	10K 5% 1/4W	R4002	1-249-437-11	CARBON	47K 5% 1/4W
R408	1-249-429-11	CARBON	10K 5% 1/4W	R4003	1-249-432-11	CARBON	18K 5% 1/4W
R409	1-249-417-11	CARBON	1K 5% 1/4W	R4004	1-249-436-11	CARBON	39K 5% 1/4W
R410	1-249-429-11	CARBON	10K 5% 1/4W	R4005	1-249-435-11	CARBON	33K 5% 1/4W
R411	1-249-429-11	CARBON	10K 5% 1/4W	R4006	1-249-435-11	CARBON	33K 5% 1/4W
R412	1-249-417-11	CARBON	1K 5% 1/4W	R4007	1-249-421-11	CARBON	2.2K 5% 1/4W
R413	1-249-403-11	CARBON	68 5% 1/4W	R4008	1-249-421-11	CARBON	2.2K 5% 1/4W
R414	1-249-403-11	CARBON	68 5% 1/4W	R4009	1-249-421-11	CARBON	2.2K 5% 1/4W
R415	1-249-403-11	CARBON	68 5% 1/4W	R4010	1-249-436-11	CARBON	39K 5% 1/4W
R416	1-249-419-11	CARBON	1.5K 5% 1/4W	R4011	1-249-417-11	CARBON	1K 5% 1/4W
R417	1-249-411-11	CARBON	330 5% 1/4W	R4012	1-249-417-11	CARBON	1K 5% 1/4W
R418	1-249-419-11	CARBON	1.5K 5% 1/4W	R4014	1-249-441-11	CARBON	100K 5% 1/4W
R419	1-249-411-11	CARBON	330 5% 1/4W	R4015	1-249-441-11	CARBON	100K 5% 1/4W
R420	1-249-419-11	CARBON	1.5K 5% 1/4W	R4016	1-249-439-11	CARBON	68K 5% 1/4W
R421	1-249-411-11	CARBON	330 5% 1/4W	R4017	1-249-425-11	CARBON	4.7K 5% 1/4W
R422	1-249-429-11	CARBON	10K 5% 1/4W	R4018	1-247-895-00	CARBON	470K 5% 1/4W
R423	1-249-429-11	CARBON	10K 5% 1/4W	R4019	1-249-424-11	CARBON	3.9K 5% 1/4W
R424	1-249-421-11	CARBON	2.2K 5% 1/4W	R4020	1-249-429-11	CARBON	10K 5% 1/4W
R425	1-247-804-11	CARBON	75 5% 1/4W	R4021	1-249-429-11	CARBON	10K 5% 1/4W
R426	1-249-409-11	CARBON	220 5% 1/4W	R4022	1-249-405-11	CARBON	100 5% 1/4W
R427	1-249-425-11	CARBON	4.7K 5% 1/4W	R4023	1-249-405-11	CARBON	100 5% 1/4W
R428	1-249-425-11	CARBON	4.7K 5% 1/4W	R4024	1-249-405-11	CARBON	100 5% 1/4W
R429	1-249-429-11	CARBON	10K 5% 1/4W	R4025	1-249-415-11	CARBON	680 5% 1/4W
R430	1-249-413-11	CARBON	470 5% 1/4W	R4026	1-247-891-00	CARBON	330K 5% 1/4W
R431	1-249-413-11	CARBON	470 5% 1/4W	R4027	1-249-429-11	CARBON	10K 5% 1/4W
R432	1-249-425-11	CARBON	4.7K 5% 1/4W				

# B1

— 74 —

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

KV-FX29TD  
RM-681

B1

F1

F2

REF. NO.	PART NO.	DESCRIPTION	REMARK
Q3013	8-729-178-54	TRANSISTOR 2SC2785	
Q3020	8-729-178-54	TRANSISTOR 2SC2785	
Q3021	8-729-178-54	TRANSISTOR 2SC2785	
Q3025	8-729-178-54	TRANSISTOR 2SC2785	
Q3026	8-729-900-36	TRANSISTOR DTC124ES	
Q3027	8-729-178-54	TRANSISTOR 2SC2785	
Q3028	8-729-178-54	TRANSISTOR 2SC2785	
Q3031	8-729-178-54	TRANSISTOR 2SC2785	
Q3032	8-729-117-54	TRANSISTOR 2SA1175	
<RESISTOR>			
R3001	1-249-418-11	CARBON 1.2K 5% 1/4W	
R3002	1-249-415-11	CARBON 680 5% 1/4W	
R3003	1-249-408-11	CARBON 180 5% 1/4W	
R3004	1-249-412-11	CARBON 390 5% 1/4W	
R3005	1-249-418-11	CARBON 1.2K 5% 1/4W	
R3006	1-249-429-11	CARBON 10K 5% 1/4W	
R3007	1-215-438-00	METAL 5.1K 1% 1/6W	
R3008	1-249-439-11	CARBON 68K 5% 1/4W	
R3009	1-249-430-11	CARBON 12K 5% 1/4W	
R3011	1-249-439-11	CARBON 68K 5% 1/4W	
R3012	1-249-414-11	CARBON 560 5% 1/4W	
R3013	1-249-433-11	CARBON 22K 5% 1/4W	
R3015	1-249-437-11	CARBON 47K 5% 1/4W	
R3017	1-249-441-11	CARBON 100K 5% 1/4W	
R3018	1-249-419-11	CARBON 1.5K 5% 1/4W	
R3019	1-249-410-11	CARBON 270 5% 1/4W	
R3020	1-249-416-11	CARBON 820 5% 1/4W	
R3021	1-249-417-11	CARBON 1K 5% 1/4W	
R3022	1-249-410-11	CARBON 270 5% 1/4W	
R3023	1-249-423-11	CARBON 3.3K 5% 1/4W	
R3024	1-249-405-11	CARBON 100 5% 1/4W	
R3025	1-249-435-11	CARBON 33K 5% 1/4W	
R3026	1-249-416-11	CARBON 820 5% 1/4W	
R3027	1-249-436-11	CARBON 39K 5% 1/4W	
R3028	1-249-419-11	CARBON 1.5K 5% 1/4W	
R3029	1-249-436-11	CARBON 39K 5% 1/4W	
R3030	1-249-435-11	CARBON 33K 5% 1/4W	
R3031	1-249-419-11	CARBON 1.5K 5% 1/4W	
R3032	1-249-414-11	CARBON 560 5% 1/4W	
R3033	1-249-435-11	CARBON 33K 5% 1/4W	
R3034	1-249-436-11	CARBON 39K 5% 1/4W	
R3035	1-249-436-11	CARBON 39K 5% 1/4W	
R3037	1-249-429-11	CARBON 10K 5% 1/4W	
R3038	1-249-429-11	CARBON 10K 5% 1/4W	
R3039	1-249-419-11	CARBON 1.5K 5% 1/4W	
R3040	1-249-421-11	CARBON 2.2K 5% 1/4W	
R3048	1-249-434-11	CARBON 27K 5% 1/4W	
R3049	1-249-405-11	CARBON 100 5% 1/4W	
R3056	1-247-893-11	CARBON 390K 5% 1/4W	
R3057	1-247-893-11	CARBON 390K 5% 1/4W	
R3058	1-249-409-11	CARBON 220 5% 1/4W	
R3061	1-249-421-11	CARBON 2.2K 5% 1/4W	
R3062	1-249-421-11	CARBON 2.2K 5% 1/4W	
R3063	1-249-401-11	CARBON 47 5% 1/4W	
R3064	1-249-433-11	CARBON 22K 5% 1/4W	
R3065	1-249-433-11	CARBON 22K 5% 1/4W	
R3071	1-249-423-11	CARBON 3.3K 5% 1/4W	
R3072	1-249-423-11	CARBON 3.3K 5% 1/4W	
R3075	1-249-437-11	CARBON 47K 5% 1/4W	
R3076	1-249-437-11	CARBON 47K 5% 1/4W	
R3077	1-249-441-11	CARBON 100K 5% 1/4W	
R3081	1-249-441-11	CARBON 100K 5% 1/4W	

REF. NO.	PART NO.	DESCRIPTION	REMARK
R3085	1-249-417-11	CARBON 1K 5% 1/4W	
R3086	1-249-435-11	CARBON 33K 5% 1/4W	
R3087	1-249-416-11	CARBON 820 5% 1/4W	
R3088	1-249-414-11	CARBON 560 5% 1/4W	
R3089	1-249-417-11	CARBON 1K 5% 1/4W	
R3090	1-249-410-11	CARBON 270 5% 1/4W	
R3091	1-249-413-11	CARBON 470 5% 1/4W	
R3092	1-249-412-11	CARBON 390 5% 1/4W	
R3093	1-249-409-11	CARBON 220 5% 1/4W	
R3094	1-249-417-11	CARBON 1K 5% 1/4W	
<VARIABLE RESISTOR>			
RV3001	1-230-504-11	RES. ADJ. CARBON 220	
<TRANSFORMER>			
T3001	1-404-584-11	COIL	
<CRYSTAL>			
X3001	1-567-131-00	OSCILLATOR, CRYSTAL	
X3002	1-567-413-11	VIBRATOR, CRYSTAL	
*****			
*1-627-734-11 F1 BOARD			
*****			
<CONNECTOR>			
CNF62	*1-566-664-11	PIN, CONNECTOR 4P	
<SWITCH>			
S1601A	1-571-433-11	SWITCH, PUSH (AC POWER)	
*****			
*A-1245-436-A F2 BOARD, COMPLETE			
*****			
<CAPACITOR>			
C1601A	1-136-519-11	FILM 0.47MF 20% 300V	
C1602A	1-136-518-11	FILM 0.33MF 20% 300V	
C1604A	1-161-964-61	CERAMIC 0.0047MF 250V	
C1605A	1-161-964-61	CERAMIC 0.0047MF 250V	
C1606	1-162-599-12	CERAMIC 0.0047MF 250V	
C1607	1-125-318-00	ELECT (BLOCK) 220MF 20% 400V	
C1608A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
C1609A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
C1610A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
C1611A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
C1612	1-124-556-11	ELECT 2200MF 20% 16V	
C1613	1-124-911-11	ELECT 220MF 20% 50V	
C1614	1-123-875-11	ELECT 10MF 20% 50V	
C1615	1-124-473-11	ELECT 1000MF 20% 10V	
C1616	1-124-477-11	ELECT 47MF 20% 16V	
C1617	1-124-499-11	ELECT 1MF 20% 50V	
C1618	1-124-477-11	ELECT 47MF 20% 16V	
C1621	1-126-101-11	ELECT 100MF 20% 16V	
C1622	1-126-101-11	ELECT 100MF 20% 16V	
C1623	1-126-176-11	ELECT 220MF 20% 10V	



**F2****Q**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<CONNECTOR>				<TRANSFORMER>			
CNF20	*1-566-664-11	PIN, CONNECTOR 4P		T1601A	1-449-456-11	TRANSFORMER, POWER	
CNF21	*1-566-664-11	PIN, CONNECTOR 4P		<THERMISTOR>			
CNF22	*1-564-891-11	PLUG, CONNECTOR 2P		THP601A	1-808-059-31	THERMISTOR, POSITIVE	
CNF63	*1-564-509-11	PLUG, CONNECTOR 6P		*****			
CNF64	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P		*A-1275-093-A Q BOARD, COMPLETE			
CNF65	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		*****			
CNF67	*1-564-506-11	PLUG, CONNECTOR 3P		<CAPACITOR>			
CNF68	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		C1301	1-131-381-00	TANTALUM 47MF	10% 10V
CNF81	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		C1302	1-101-004-00	CERAMIC 0.01MF	50V
<DIODE>				C1303	1-126-101-11	ELECT 100MF	20% 16V
D1601	8-719-946-90	DIODE KBU4JL-6088		C1304	1-101-004-00	CERAMIC 0.01MF	50V
D1602	8-719-511-40	DIODE S1VB40		C1305	1-131-381-00	TANTALUM 47MF	10% 10V
D1603	8-719-911-19	DIODE 1SS119		C1306	1-101-004-00	CERAMIC 0.01MF	50V
D1604	8-719-911-19	DIODE 1SS119		C1307	1-131-377-00	TANTALUM 10MF	10% 10V
D1605	8-719-109-97	DIODE RD6.8ES-B2		C1308	1-101-004-00	CERAMIC 0.01MF	50V
D1606	8-719-911-19	DIODE 1SS119		C1309	1-131-377-00	TANTALUM 10MF	10% 10V
<FUSE>				C1310	1-101-004-00	CERAMIC 0.01MF	50V
F1601A	1-532-350-11	FUSE, TIME-LAG 4A/250V		C1311	1-126-101-11	ELECT 100MF	20% 16V
	1-533-087-00	HOLDER, FUSE; F1601		C1312	1-101-004-00	CERAMIC 0.01MF	50V
<IC>				C1313	1-131-381-00	TANTALUM 47MF	10% 10V
IC1601	8-759-700-06	IC NJM7812B		C1314	1-101-004-00	CERAMIC 0.01MF	50V
IC1603	8-749-930-52	IC S1-3052V		C1315	1-123-875-11	ELECT 10MF	20% 50V
	4-377-115-01	SPACER, MICA; IC1603		C1316	1-123-875-11	ELECT 10MF	20% 50V
	*4-391-704-01	HOLDER (A), TR; IC 1603		C1317	1-101-004-00	CERAMIC 0.01MF	50V
<FILTER>				C1318	1-101-004-00	CERAMIC 0.01MF	50V
LF1601A	1-424-183-11	TRANSFORMER, LINE FILTER		C1319	1-101-004-00	CERAMIC 0.01MF	50V
LF1602A	1-424-183-11	TRANSFORMER, LINE FILTER		C1320	1-123-875-11	ELECT 10MF	20% 50V
LF1603A	1-421-592-00	TRANSFORMER, FERRITE		C1321	1-123-875-11	ELECT 10MF	20% 50V
<TRANSISTOR>				C1322	1-101-004-00	CERAMIC 0.01MF	50V
Q1601	8-729-109-53	TRANSISTOR 2SD795A-Q		C1323	1-101-004-00	CERAMIC 0.01MF	50V
Q1602	8-729-178-54	TRANSISTOR 2SC2785		C1324	1-101-004-00	CERAMIC 0.01MF	50V
Q1603	8-729-178-54	TRANSISTOR 2SC2785		C1325	1-123-875-11	ELECT 10MF	20% 50V
<RESISTOR>				C1326	1-123-875-11	ELECT 10MF	20% 50V
R1603A	1-205-949-11	WIREWOUND 1.8 5% 10W		C1327	1-101-004-00	CERAMIC 0.01MF	50V
R1604A	1-244-945-91	CARBON 1M 5% 1/2W		C1328	1-101-004-00	CERAMIC 0.01MF	50V
R1606A	1-247-289-11	CARBON 8.2M 5% 1W		C1329	1-101-004-00	CERAMIC 0.01MF	50V
R1607A	1-249-377-51	CARBON 0.47 5% 1/4W F		C1336	1-131-377-00	TANTALUM 10MF	10% 10V
R1608A	1-249-377-51	CARBON 0.47 5% 1/4W F		C1337	1-101-004-00	CERAMIC 0.01MF	50V
R1609A	1-249-377-51	CARBON 0.47 5% 1/4W F		C1338	1-131-377-00	TANTALUM 10MF	10% 10V
R1610	1-249-423-11	CARBON 3.3K 5% 1/4W		C1339	1-101-004-00	CERAMIC 0.01MF	50V
R1611	1-249-425-11	CARBON 4.7K 5% 1/4W		C1340	1-123-875-11	ELECT 10MF	20% 50V
R1612	1-249-423-11	CARBON 3.3K 5% 1/4W		C1343	1-101-004-00	CERAMIC 0.01MF	50V
R1613	1-249-421-11	CARBON 2.2K 5% 1/4W		C1344	1-101-004-00	CERAMIC 0.01MF	50V
R1615	1-249-421-11	CARBON 2.2K 5% 1/4W		C1345	1-101-004-00	CERAMIC 0.01MF	50V
R1623A	1-205-949-11	WIREWOUND 1.8 5% 10W		C1348	1-101-004-00	CERAMIC 0.01MF	50V
<RELAY>				C1349	1-101-004-00	CERAMIC 0.01MF	50V
RY1601A	1-515-579-11	RELAY		C1350	1-101-004-00	CERAMIC 0.01MF	50V
				C1353	1-101-004-00	CERAMIC 0.01MF	50V
				C1354	1-101-004-00	CERAMIC 0.01MF	50V
				C1355	1-101-004-00	CERAMIC 0.01MF	50V
				C1356	1-101-004-00	CERAMIC 0.01MF	50V
				C1357	1-101-004-00	CERAMIC 0.01MF	50V
				C1358	1-101-004-00	CERAMIC 0.01MF	50V
				C1359	1-101-004-00	CERAMIC 0.01MF	50V
				C1360	1-101-004-00	CERAMIC 0.01MF	50V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1361	1-136-160-00	MYLAR	0.039MF 10% 50V	IC1310	8-752-328-75	IC CXD2001Q	
C1362	1-124-902-00	ELECT	0.47MF 20% 50V	IC1311	8-759-970-72	IC CXK1206M	
C1363	1-124-902-00	ELECT	0.47MF 20% 50V	IC1312	8-759-970-72	IC CXK1206M	
C1364	1-102-074-00	CERAMIC	0.001MF 10% 50V	IC1314	8-752-328-71	IC CXD2000Q	
C1365	1-102-947-00	CERAMIC	10PF 0.5PF 50V	IC1315	8-759-914-44	IC TL431CLPB	
C1366	1-102-973-00	CERAMIC	100PF 5% 50V	IC1316	8-759-947-14	IC 74AC04PC	
C1367	1-102-973-00	CERAMIC	100PF 5% 50V	IC1317	8-752-032-93	IC CXA1260Q-Z	
C1368	1-102-973-00	CERAMIC	100PF 5% 50V	IC1321	8-759-205-06	IC MC74HC74F	
C1369	1-102-973-00	CERAMIC	100PF 5% 50V	IC1322	8-759-011-65	IC MC74HC4053F	
C1370	1-101-004-00	CERAMIC	0.01MF 50V				
C1371	1-131-377-00	TANTALUM	10MF 10% 10V				
C1372	1-101-004-00	CERAMIC	0.01MF 50V				
C1373	1-101-004-00	CERAMIC	0.01MF 50V				
C1374	1-124-963-11	ELECT	33MF 20% 16V				
C1375	1-124-963-11	ELECT	33MF 20% 16V				
C1376	1-124-963-11	ELECT	33MF 20% 16V				
C1385	1-123-875-11	ELECT	10MF 20% 50V				
C1389	1-130-480-00	MYLAR	0.0056MF 10% 50V				
C1390	1-124-499-11	ELECT	1MF 20% 50V				
<CONNECTOR>							
CNQ43	*1-565-494-11	CONNECTOR, BOARD TO BOARD 18P					
CNQ44	*1-565-494-11	CONNECTOR, BOARD TO BOARD 18P					
<DIODE>							
D1301	8-713-300-00	DIODE 1T33					
<FILTER>							
FL1301	1-236-164-11	ENCAPSULATED COMPONENT					
FL1302	1-236-129-11	ENCAPSULATED COMPONENT					
FL1303	1-236-164-11	ENCAPSULATED COMPONENT					
FL1304	1-236-164-11	ENCAPSULATED COMPONENT					
FL1305	1-236-071-11	ENCAPSULATED COMPONENT					
FL1306	1-236-071-11	ENCAPSULATED COMPONENT					
FL1307	1-236-129-11	ENCAPSULATED COMPONENT					
FL1308	1-236-129-11	ENCAPSULATED COMPONENT					
FL1309	1-236-164-11	ENCAPSULATED COMPONENT					
FL1310	1-236-129-11	ENCAPSULATED COMPONENT					
FL1311	1-236-164-11	ENCAPSULATED COMPONENT					
FL1312	1-236-164-11	ENCAPSULATED COMPONENT					
FL1313	1-236-164-11	ENCAPSULATED COMPONENT					
FL1314	1-236-164-11	ENCAPSULATED COMPONENT					
FL1315	1-236-129-11	ENCAPSULATED COMPONENT					
FL1320	1-236-304-11	FILTER, LOW PASS					
FL1321	1-236-304-11	FILTER, LOW PASS					
FL1322	1-236-304-11	FILTER, LOW PASS					
FL1323	1-236-303-11	FILTER, LOW PASS					
FL1324	1-236-303-11	FILTER, LOW PASS					
FL1325	1-236-303-11	FILTER, LOW PASS					
<IC>							
IC1301	8-752-032-55	IC CXA1096M					
IC1302	8-752-032-55	IC CXA1096M					
IC1303	8-752-032-55	IC CXA1096M					
IC1304	8-752-328-75	IC CXD2001Q					
IC1305	8-759-970-72	IC CXK1206M					
IC1306	8-759-970-72	IC CXK1206M					
IC1307	8-752-328-75	IC CXD2001Q					
IC1308	8-759-970-72	IC CXK1206M					
IC1309	8-759-970-72	IC CXK1206M					
<COIL>							
L1304	1-410-470-11	INDUCTOR 10UH					
L1305	1-408-397-00	INDUCTOR 1UH					
L1306	1-408-397-00	INDUCTOR 1UH					
L1307	1-410-470-11	INDUCTOR 10UH					
L1308	1-408-397-00	INDUCTOR 1UH					
L1312	1-404-608-11	COIL					
<TRANSISTOR>							
Q1301	8-729-178-54	TRANSISTOR 2SC2785					
Q1302	8-729-178-54	TRANSISTOR 2SC2785					
Q1303	8-729-178-54	TRANSISTOR 2SC2785					
Q1305	8-729-117-54	TRANSISTOR 2SA1175					
Q1306	8-729-178-54	TRANSISTOR 2SC2785					
Q1307	8-729-117-54	TRANSISTOR 2SA1175					
Q1308	8-729-178-54	TRANSISTOR 2SC2785					
Q1315	8-729-178-54	TRANSISTOR 2SC2785					
<RESISTOR>							
R1301	1-249-408-11	CARBON 180 5% 1/4W					
R1302	1-249-408-11	CARBON 180 5% 1/4W					
R1303	1-249-408-11	CARBON 180 5% 1/4W					
R1304	1-249-420-11	CARBON 1.8K 5% 1/4W					
R1305	1-249-420-11	CARBON 1.8K 5% 1/4W					
R1306	1-249-420-11	CARBON 1.8K 5% 1/4W					
R1307	1-249-413-11	CARBON 470 5% 1/4W					
R1308	1-249-421-11	CARBON 2.2K 5% 1/4W					
R1309	1-249-423-11	CARBON 3.3K 5% 1/4W					
R1310	1-249-423-11	CARBON 3.3K 5% 1/4W					
R1311	1-249-423-11	CARBON 3.3K 5% 1/4W					
R1312	1-249-414-11	CARBON 560 5% 1/4W					
R1313	1-249-414-11	CARBON 560 5% 1/4W					
R1314	1-249-414-11	CARBON 560 5% 1/4W					
R1315	1-249-419-11	CARBON 1.5K 5% 1/4W					
R1316	1-249-419-11	CARBON 1.5K 5% 1/4W					
R1317	1-247-901-11	CARBON 820K 5% 1/4W					
R1318	1-249-417-11	CARBON 1K 5% 1/4W					
R1319	1-249-441-11	CARBON 100K 5% 1/4W					
R1320	1-249-415-11	CARBON 680 5% 1/4W					
R1321	1-249-417-11	CARBON 1K 5% 1/4W					
R1322	1-249-417-11	CARBON 1K 5% 1/4W					
R1323	1-249-417-11	CARBON 1K 5% 1/4W					
R1324	1-249-417-11	CARBON 1K 5% 1/4W					
R1325	1-249-409-11	CARBON 220 5% 1/4W					
R1326	1-249-409-11	CARBON 220 5% 1/4W					
R1327	1-249-409-11	CARBON 220 5% 1/4W					
R1328	1-249-408-11	CARBON 180 5% 1/4W					
R1329	1-249-397-11	CARBON 22 5% 1/4W					
R1330	1-249-417-11	CARBON 1K 5% 1/4W					
R1331	1-247-735-11	CARBON 47 5% 1/2W					



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R1332	1-249-397-11	CARBON 22 5% 1/4W		C142	1-101-361-00	CERAMIC 150PF 5% 50V	
R1333	1-249-413-11	CARBON 470 5% 1/4W		C143	1-102-973-00	CERAMIC 100PF 5% 50V	
R1334	1-249-423-11	CARBON 3.3K 5% 1/4W		C144	1-102-965-00	CERAMIC 39PF 5% 50V	
R1335	1-249-421-11	CARBON 2.2K 5% 1/4W		C151	1-124-477-11	ELECT 47MF 20% 16V	
R1336	1-249-409-11	CARBON 220 5% 1/4W		C152	1-136-161-00	FILM 0.047MF 5% 50V	
R1337	1-249-409-11	CARBON 220 5% 1/4W		C153	1-101-004-00	CERAMIC 0.01MF 50V	
R1360	1-249-429-11	CARBON 10K 5% 1/4W		C154	1-101-004-00	CERAMIC 0.01MF 50V	
R1361	1-249-429-11	CARBON 10K 5% 1/4W		C155	1-124-477-11	ELECT 47MF 20% 16V	
R1368	1-249-417-11	CARBON 1K 5% 1/4W					
R1369	1-249-414-11	CARBON 560 5% 1/4W					
R1370	1-249-409-11	CARBON 220 5% 1/4W					
R1371	1-247-887-00	CARBON 220K 5% 1/4W					
R1372	1-249-441-11	CARBON 100K 5% 1/4W					
R1373	1-249-417-11	CARBON 1K 5% 1/4W					
R1374	1-249-417-11	CARBON 1K 5% 1/4W					
R1375	1-247-887-00	CARBON 220K 5% 1/4W					
R1376	1-247-887-00	CARBON 220K 5% 1/4W					
R1377	1-247-887-00	CARBON 220K 5% 1/4W					
*****							
*A-1296-497-A	A BOARD, COMPLETE *****						
1-464-964-11	IF BLOCK (IFG-5.5S)						
*1-565-488-11	CONNECTOR, BOARD TO BOARD 12P						
*4-369-734-01	HEAT SINK						
	<CAPACITOR>						
C101	1-126-233-11	ELECT 22MF 20% 50V					
C102	1-126-103-11	ELECT 470MF 20% 16V					
C103	1-130-475-00	MYLAR 0.0022MF 5% 50V					
C104	1-124-477-11	ELECT 47MF 20% 16V					
C105	1-101-003-00	CERAMIC 0.0047MF 50V					
C106	1-126-233-11	ELECT 22MF 20% 50V					
C107	1-136-177-00	FILM 1MF 5% 50V					
C108	1-101-004-00	CERAMIC 0.01MF 50V					
C109	1-101-003-00	CERAMIC 0.0047MF 50V					
C110	1-101-003-00	CERAMIC 0.0047MF 50V					
C111	1-124-477-11	ELECT 47MF 20% 16V					
C112	1-101-003-00	CERAMIC 0.0047MF 50V					
C113	1-101-004-00	CERAMIC 0.01MF 50V					
C115	1-123-875-11	ELECT 10MF 20% 50V					
C116	1-123-875-11	ELECT 10MF 20% 50V					
C117	1-123-875-11	ELECT 10MF 20% 50V					
C118	1-123-875-11	ELECT 10MF 20% 50V					
C119	1-136-161-00	FILM 0.047MF 5% 50V					
C120	1-102-965-00	CERAMIC 39PF 5% 50V					
C121	1-124-477-11	ELECT 47MF 20% 16V					
C122	1-124-477-11	ELECT 47MF 20% 16V					
C123	1-101-004-00	CERAMIC 0.01MF 50V					
C124	1-124-477-11	ELECT 47MF 20% 16V					
C127	1-124-477-11	ELECT 47MF 20% 16V					
C128	1-124-477-11	ELECT 47MF 20% 16V					
C129	1-124-477-11	ELECT 47MF 20% 16V					
C130	1-126-101-11	ELECT 100MF 20% 16V					
C132	1-101-888-00	CERAMIC 68PF 5% 50V					
C133	1-102-973-00	CERAMIC 100PF 5% 50V					
C134	1-102-963-00	CERAMIC 33PF 5% 50V					
C135	1-124-477-11	ELECT 47MF 20% 16V					
C136	1-124-477-11	ELECT 47MF 20% 16V					
C137	1-124-477-11	ELECT 47MF 20% 16V					
C138	1-136-165-00	FILM 0.1MF 5% 50V					
C141	1-102-822-00	CERAMIC 390PF 5% 50V					

**A C**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R109	1-249-441-11	CARBON	100K 5% 1/4W				
R110	1-249-429-11	CARBON	10K 5% 1/4W				
R111	1-249-423-11	CARBON	3.3K 5% 1/4W				
R112	1-249-425-11	CARBON	4.7K 5% 1/4W				
R113	1-249-425-11	CARBON	4.7K 5% 1/4W				
R114	1-249-413-11	CARBON	470 5% 1/4W				
R115	1-249-405-11	CARBON	100 5% 1/4W				
R118	1-249-429-11	CARBON	10K 5% 1/4W				
R121	1-249-429-11	CARBON	10K 5% 1/4W				
R122	1-249-428-11	CARBON	8.2K 5% 1/4W				
R123	1-249-431-11	CARBON	15K 5% 1/4W				
R124	1-249-431-11	CARBON	15K 5% 1/4W				
R125	1-249-431-11	CARBON	15K 5% 1/4W				
R126	1-249-431-11	CARBON	15K 5% 1/4W				
R127	1-249-431-11	CARBON	15K 5% 1/4W				
R128	1-249-413-11	CARBON	470 5% 1/4W				
R129	1-249-421-11	CARBON	2.2K 5% 1/4W				
R130	1-249-421-11	CARBON	2.2K 5% 1/4W				
R131	1-249-422-11	CARBON	2.7K 5% 1/4W				
R133	1-249-422-11	CARBON	2.7K 5% 1/4W				
R134	1-249-422-11	CARBON	2.7K 5% 1/4W				
R136	1-249-413-11	CARBON	470 5% 1/4W				
R137	1-249-405-11	CARBON	100 5% 1/4W				
R138	1-249-413-11	CARBON	470 5% 1/4W				
R139	1-249-413-11	CARBON	470 5% 1/4W				
R140	1-249-418-11	CARBON	1.2K 5% 1/4W				
R141	1-249-413-11	CARBON	470 5% 1/4W				
R142	1-249-413-11	CARBON	470 5% 1/4W				
R143	1-249-416-11	CARBON	820 5% 1/4W				
R144	1-249-417-11	CARBON	1K 5% 1/4W				
R145	1-249-413-11	CARBON	470 5% 1/4W				
R146	1-249-421-11	CARBON	2.2K 5% 1/4W				
R147	1-249-429-11	CARBON	10K 5% 1/4W				
R152	1-249-417-11	CARBON	1K 5% 1/4W				
R153	1-249-417-11	CARBON	1K 5% 1/4W				
R154	1-249-414-11	CARBON	560 5% 1/4W				
R155	1-249-417-11	CARBON	1K 5% 1/4W				
R157	1-249-417-11	CARBON	1K 5% 1/4W				
R158	1-249-409-11	CARBON	220 5% 1/4W				
R159	1-249-409-11	CARBON	220 5% 1/4W				
R160	1-249-396-11	CARBON	18 5% 1/4W				
R166	1-249-431-11	CARBON	15K 5% 1/4W				
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C

**VM**

D

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\*A-1345-798-A D BOARD, COMPLETE  
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1-424-168-11 TRANSFORMER, PIN MODULATION  
1-459-919-11 TRANSFORMER  
\*4-341-736-01 BRACKET, FOCUS VR  
\*4-341-751-01 EYELET  
\*4-341-752-01 EYELET

&lt;CAPACITOR&gt;

C501	1-124-122-11	ELECT	100MF	20%	50V
C503	1-102-123-00	CERAMIC	0.0033MF	10%	50V
C504	1-124-120-11	ELECT	220MF	20%	25V
C505	1-124-902-00	ELECT	0.47MF	20%	50V
C506	1-102-112-00	CERAMIC	330PF	10%	50V
C507	1-136-169-00	FILM	0.22MF	5%	50V
C508	1-130-491-00	MYLAR	0.047MF	5%	50V
C509	1-126-101-11	ELECT	100MF	20%	16V
C510	1-106-367-00	MYLAR	0.01MF	10%	100V
C512	1-130-475-00	MYLAR	0.0022MF	10%	50V
C513	1-124-499-11	ELECT	1MF	20%	50V
C515	1-102-116-00	CERAMIC	680PF	10%	50V
C516	1-124-499-11	ELECT	1MF	20%	50V
C517	1-124-902-00	ELECT	0.47MF	20%	50V
C518	1-136-175-00	FILM	0.68MF	5%	50V
C519	1-124-637-11	ELECT	1000MF	20%	50V

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

KV-FX29TD  
RM-681

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C520	1-124-912-11	ELECT	330MF 20% 50V	C836	1-102-030-00	CERAMIC 330PF 10% 500V	
C521	1-106-391-12	MYLAR	0.1MF 10% 200V	C837	1-124-480-11	ELECT 470MF 20% 25V	
C522	1-108-428-12	MYLAR	0.039MF 10% 200V	C838	1-106-367-00	MYLAR 0.01MF 10% 200V	
C523	1-106-387-00	MYLAR	0.068MF 10% 200V	C839	1-124-929-11	ELECT 22MF 20% 100V	
C524	1-124-342-00	ELECT	3.3MF 20% 160V	C840	1-162-114-00	CERAMIC 0.0047MF 2KV	
C525	1-102-820-00	CERAMIC	330PF 5% 50V	C841	1-106-383-00	MYLAR 0.047MF 10% 200V	
C526	1-123-875-11	ELECT	10MF 20% 50V	C842	1-136-153-00	MYLAR 0.01MF 10% 50V	
C527	1-102-978-00	CERAMIC	220PF 5% 50V	C843	1-130-479-00	MYLAR 0.0047MF 10% 50V	
C528	1-124-477-11	ELECT	47MF 20% 16V	C844	1-124-910-11	ELECT 47MF 20% 50V	
C530	1-124-122-11	ELECT	100MF 20% 50V	C845	1-126-233-11	ELECT 22MF 20% 50V	
C531	1-106-387-00	MYLAR	0.068MF 10% 200V	C847	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C539	1-102-233-00	CERAMIC	33PF 10% 500V	C848	1-102-244-00	CERAMIC 220PF 10% 500V	
C540	1-130-479-00	MYLAR	0.0047MF 10% 50V	C861	1-124-499-11	ELECT 1MF 20% 50V	
C541	1-124-902-00	MYLAR	0.47MF 20% 50V	C862	1-136-154-00	MYLAR 0.012MF 10% 50V	
C542	1-106-220-00	MYLAR	0.1MF 10% 100V	C863	1-106-351-00	MYLAR 0.0022MF 10% 100V	
C543	1-106-375-12	MYLAR	0.022MF 10% 100V	C864	1-106-343-00	MYLAR 0.001MF 10% 100V	
C544	1-102-244-00	CERAMIC	220PF 10% 500V	C865	1-124-910-11	ELECT 47MF 20% 50V	
C545	1-124-925-11	ELECT	2.2MF 20% 50V	C866	1-106-379-12	MYLAR 0.033MF 10% 200V	
C546	1-123-875-11	ELECT	10MF 20% 50V	C867	1-124-902-00	ELECT 0.47MF 20% 50V	
C547	1-130-728-00	FILM	0.0022MF 5% 50V	C868	1-106-383-00	MYLAR 0.047MF 10% 100V	
C548	1-102-820-00	CERAMIC	330PF 5% 50V	C869	1-106-375-12	MYLAR 0.022MF 10% 200V	
C549	1-124-122-11	ELECT	100MF 20% 50V	<CONNECTOR>			
C550	1-124-925-11	ELECT	2.2MF 20% 50V	CN801	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
C551	1-124-122-11	ELECT	100MF 20% 50V	CND81	*1-564-513-11	PLUG, CONNECTOR 10P	
C552	1-124-464-11	ELECT	0.22MF 20% 50V	CND82	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
C553	1-126-101-11	ELECT	100MF 20% 16V	CND83	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
C554	1-124-927-11	ELECT	4.7MF 20% 50V	CND84	*1-565-952-11	PIN, CONNECTOR 10P	
C555	1-136-155-00	MYLAR	0.015MF 10% 50V	CND85	*1-564-507-11	PLUG, CONNECTOR 4P	
C556	1-124-499-11	ELECT	1MF 20% 50V	CND86	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
C557	1-126-101-11	ELECT	100MF 20% 16V	CND87	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
C558	1-124-499-11	ELECT	1MF 20% 50V	CND88	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
C560	1-130-477-00	MYLAR	0.0033MF 10% 50V	CND89	*1-564-508-11	PLUG, CONNECTOR 5P	
C561	1-102-112-00	CERAMIC	330PF 10% 50V	<DIODE>			
C801	1-123-875-11	ELECT	10MF 20% 50V	D502	8-719-109-75	DIODE RD4.3ES-B2	
C802	1-124-902-00	ELECT	0.47MF 20% 50V	D503	8-719-911-19	DIODE 1SS119	
C803	1-124-925-11	ELECT	2.2MF 20% 50V	D505	8-719-936-83	DIODE GP08DPKG23	
C804	1-124-910-11	ELECT	47MF 20% 50V	D506	8-719-936-83	DIODE GP08DPKG23	
C805	1-106-343-00	MYLAR	0.001MF 10% 200V	D507	8-719-936-83	DIODE GP08DPKG23	
C806	1-124-122-11	ELECT	100MF 20% 50V	D508	8-719-936-83	DIODE GP08DPKG23	
C807	1-136-165-00	MYLAR	0.1MF 10% 50V	D509	8-719-936-83	DIODE GP08DPKG23	
C808	1-124-499-11	ELECT	1MF 20% 50V	D510	8-719-936-83	DIODE GP08DPKG23	
C809	1-130-471-00	MYLAR	0.001MF 10% 50V	D511	8-719-911-19	DIODE 1SS119	
C810	1-126-101-11	ELECT	100MF 20% 16V	D513	8-719-911-19	DIODE 1SS119	
C814	1-162-134-11	CERAMIC	470PF 10% 2KV	D514	8-719-911-19	DIODE 1SS119	
C815	1-124-927-11	ELECT	4.7MF 20% 50V	D515	8-719-936-83	DIODE GP08DPKG23	
C816	1-124-494-00	ELECT	33MF 20% 160V	D516	8-719-911-19	DIODE 1SS119	
C817	1-125-319-00	ELECT (BLOCK)	330MF 20% 160V	D801	8-719-911-19	DIODE 1SS119	
C818	1-102-244-00	CERAMIC	220PF 10% 500V	D802	8-719-911-19	DIODE 1SS119	
C819	1-102-212-00	CERAMIC	820PF 10% 500V	D803	8-719-911-19	DIODE 1SS119	
C820	1-106-383-00	MYLAR	0.047MF 10% 200V	D805	8-719-911-19	DIODE 1SS119	
C822 $\Delta$	1-162-116-51	CERAMIC	680PF 10% 2KV	D806	8-719-911-19	DIODE 1SS119	
C823 $\Delta$	1-162-116-51	CERAMIC	680PF 10% 2KV	D807	8-719-924-06	DIODE ERC24-06S	
C824	1-108-410-12	MYLAR	0.0012MF 200V	D808	8-719-971-09	DIODE ERD08-15	
C825	1-102-030-00	CERAMIC	330PF 10% 500V	4-377-115-01 SPACER, MICA; D808			
C826	1-129-723-00	FILM	0.056MF 5% 630V	*4-391-704-01 HOLDER (A), TR; D808			
C827	1-130-660-11	FILM	20000MF 3% 1.6KV	D809	8-719-971-08	DIODE ESAC39M-06C	
C828	1-136-126-00	FILM	0.82MF 5% 400V	D810	8-719-936-83	DIODE GP08DPKG23	
C829	1-106-351-00	MYLAR	0.0022MF 200V	D811	8-719-936-83	DIODE GP08DPKG23	
C830	1-136-598-11	FILM	3MF 5% 200V	D812	8-719-924-06	DIODE ERC24-06S	
C831	1-130-797-11	FILM	0.68MF 10% 250V	D813	8-719-901-58	DIODE RGP15JPKG23	
C832	1-106-395-00	MYLAR	0.15MF 10% 200V	D814	8-719-300-65	DIODE ES1F	
C833	1-162-131-11	CERAMIC	220PF 10% 2KV				
C834	1-124-637-11	ELECT	1000MF 20% 50V				
C835	1-102-030-00	CERAMIC	330PF 10% 500V				

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
D815	8-719-924-06	DIODE ERC24-06S		Q5004	8-729-900-89	TRANSISTOR DTC144ES		
D816	8-719-300-65	DIODE ES1F		Q5005	8-729-900-89	TRANSISTOR DTC144ES		
D860	8-719-936-83	DIODE GP08DPKG23						
D861	8-719-936-83	DIODE GP08DPKG23						
D862	8-719-931-05	DIODE EQB01-05				<RESISTOR>		
	<IC>			R503	1-215-461-00	METAL	47K 1%	1/6W
IC501	8-759-100-60	IC UPC1377C		R504	1-249-417-11	CARBON	1K 5%	1/4W
IC503	8-759-178-12	IC UPC78L12		R505	1-249-437-11	CARBON	47K 5%	1/4W
IC801	8-759-942-16	IC TEA2031A		R506	1-249-421-11	CARBON	2.2K 5%	1/4W
IC802	8-759-145-58	IC UPC4558C		R507	1-217-387-00	FUSIBLE	10 5%	1/4W F
IC803	8-759-982-30	IC RC78L24A		R508	1-215-484-00	METAL	430K 1%	1/6W
	<COIL>			R509	1-249-428-11	CARBON	8.2K 5%	1/4W
L801	1-459-474-00	COIL (WITH CORE)		R510	1-215-451-00	METAL	18K 1%	1/6W
L803	1-408-228-21	INDUCTOR 560UH		R511	1-249-421-11	CARBON	2.2K 5%	1/4W
L804	1-459-104-00	COIL, DUST CORE		R512	1-249-429-11	CARBON	10K 5%	1/4W
L805	1-459-194-00	INDUCTOR 1.8MMH		R513	1-215-469-00	METAL	100K 1%	1/6W
L806	1-410-396-41	FERRITE BEAD INDUCTOR		R515	1-215-447-00	METAL	12K 1%	1/6W
L807	1-459-485-00	COIL, CHOKER		R516	1-215-451-00	METAL	18K 1%	1/6W
L808	1-410-674-31	INDUCTOR 82UH		R518	1-249-425-11	CARBON	4.7K 5%	1/4W
L809	1-459-104-00	COIL, DUST CORE		R519	1-202-723-00	SOLID	2.2M 10%	1/2W
L810	1-410-396-41	FERRITE BEAD INDUCTOR		R520	1-249-429-11	CARBON	10K 5%	1/4W
L860	1-408-247-00	INDUCTOR 33MMH		R521	1-249-423-11	CARBON	3.3K 5%	1/4W
L861	1-443-012-00	TRANSFORMER,DYNAMIC CONVERSION		R522	1-249-413-11	CARBON	470 5%	1/4W
L862	1-459-105-21	COIL(WITH CORE)		R523	1-249-418-11	CARBON	1.2K 5%	1/4W
	<NEON LAMP>			R524	1-249-417-11	CARBON	1K 5%	1/4W
NL801	1-519-108-XX	LAMP, NEON		R525	1-249-417-11	CARBON	1K 5%	1/4W
	<IC LINK>			R526	1-215-878-00	METAL OXIDE	33K 5%	1W F
PS801A	1-532-605-91	LINK, IC		R527	1-249-405-11	CARBON	100 5%	1/4W
	<TRANSISTOR>			R528	1-249-749-00	CARBON	2.2M 5%	1/4W
Q502	8-729-117-54	TRANSISTOR 2SA1175		R529	1-249-424-11	CARBON	3.9K 5%	1/4W
Q504	8-729-178-54	TRANSISTOR 2SC2785		R530	1-249-429-11	CARBON	10K 5%	1/4W
Q505	8-729-178-54	TRANSISTOR 2SC2785		R531	1-249-423-11	CARBON	3.3K 5%	1/4W
Q506	8-729-117-54	TRANSISTOR 2SA1175		R532	1-202-731-00	SOLID	10M 10%	1/2W
Q507	8-729-177-43	TRANSISTOR 2SD774		R533	1-215-453-00	METAL	22K 1%	1/6W
Q508	8-729-103-43	TRANSISTOR 2SB734-3		R534	1-215-459-00	METAL	39K 1%	1/6W
Q509	8-729-320-27	TRANSISTOR 2SC4381		R535	1-216-457-00	METAL OXIDE	1.2K 5%	2W F
Q510	8-729-320-28	TRANSISTOR 2SA1667		R536	1-215-444-00	METAL	9.1K 1%	1/6W
Q511	8-729-195-82	TRANSISTOR 2SC2958-K		R537	1-249-415-11	CARBON	680 5%	1/4W
Q512	8-729-117-54	TRANSISTOR 2SA1175		R538	1-249-413-11	CARBON	470 5%	1/4W
Q513	8-729-178-54	TRANSISTOR 2SC2785		R539	1-249-416-11	CARBON	820 5%	1/4W
Q514	8-729-178-54	TRANSISTOR 2SC2785		R540	1-216-351-00	METAL OXIDE	1.5 5%	1W F
Q801	8-729-600-27	TRANSISTOR 2SC2458-BL		R541	1-215-916-00	METAL OXIDE	680 5%	3W F





REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R573	1-249-411-11	CARBON	330 5% 1/4W	R844	1-215-898-11	METAL OXIDE	10K 5% 2W F
R574	1-249-417-11	CARBON	1K 5% 1/4W	R846	1-247-727-11	CARBON	10 5% 1/2W
R575	1-249-417-11	CARBON	1K 5% 1/4W	R847	1-215-868-00	METAL OXIDE	680 5% 1W F
R576	1-249-440-11	CARBON	82K 5% 1/4W	R848	1-216-449-11	METAL OXIDE	56 5% 2W F
R577	1-249-423-11	CARBON	3.3K 5% 1/4W	R849	1-216-450-00	METAL OXIDE	82 5% 2W F
R578	1-249-433-11	CARBON	22K 5% 1/4W	R850	1-216-450-00	METAL OXIDE	82 5% 2W F
R579	1-249-433-11	CARBON	22K 5% 1/4W	R851	1-216-357-00	METAL OXIDE	4.7 5% 1W F
R580	1-249-430-11	CARBON	12K 5% 1/4W	R852	1-215-904-11	METAL OXIDE	100K 5% 2W F
R581	1-215-449-00	METAL	15K 1% 1/6W	R853	1-249-397-11	CARBON	22 5% 1/4W F
R582	1-214-757-00	METAL	15K 1% 1/4W	R854	1-249-441-11	CARBON	100K 5% 1/4W
R583	1-215-421-00	METAL	1K 1% 1/6W	R855	1-214-925-00	CARBON	330K 5% 1/2W
R584	1-249-405-11	CARBON	100 5% 1/4W	R856	1-247-725-11	CARBON	10K 5% 1/4W
R585	1-249-419-11	CARBON	1.5K 5% 1/4W	R857	1-249-419-11	CARBON	1.5K 5% 1/4W
R586	1-249-428-11	CARBON	8.2K 5% 1/4W	R858	1-247-891-00	CARBON	330K 5% 1/4W
R587	1-249-429-11	CARBON	10K 5% 1/4W	R861	1-247-887-00	CARBON	220K 5% 1/4W
R588	1-249-427-11	CARBON	6.8K 5% 1/4W	R862	1-249-436-11	CARBON	39K 5% 1/4W
R589	1-249-429-11	CARBON	10K 5% 1/4W	R863	1-247-889-00	CARBON	270K 5% 1/4W
R590	1-249-417-11	CARBON	1K 5% 1/4W	R864	1-212-952-00	FUSIBLE	5.6 5% 1/2W F
R591	1-249-417-11	CARBON	1K 5% 1/4W	R865	1-215-881-11	METAL OXIDE	15 5% 2W F
R592	1-249-440-11	CARBON	82K 5% 1/4W	R867	1-249-411-11	CARBON	330 5% 1/4W F
R593	1-249-429-11	CARBON	10K 5% 1/4W	R868	1-249-423-11	CARBON	3.3K 5% 1/4W
R594	1-249-429-11	CARBON	10K 5% 1/4W	R869	1-249-411-11	CARBON	330 5% 1/4W
R595	1-249-427-11	CARBON	6.8K 5% 1/4W	R870	1-215-906-11	METAL OXIDE	15 5% 3W F
R596	1-249-423-11	CARBON	3.3K 5% 1/4W	R5001	1-249-429-11	CARBON	10K 5% 1/4W
R597	1-249-423-11	CARBON	3.3K 5% 1/4W	R5003	1-249-421-11	CARBON	2.2K 5% 1/4W
R598	1-249-441-11	CARBON	100K 5% 1/4W	R5006	1-249-429-11	CARBON	10K 5% 1/4W
R599	1-249-433-11	CARBON	22K 5% 1/4W	R5010	1-215-894-11	METAL OXIDE	2.2K 5% 2W F
R801	1-249-417-11	CARBON	1K 5% 1/4W	<VARIABLE RESISTOR>			
R802	1-249-429-11	CARBON	10K 5% 1/4W	RV501	1-230-504-11	RES, ADJ, CARBON	220
R803	1-249-428-11	CARBON	8.2K 5% 1/4W	RV502	1-228-994-00	RES, ADJ, CARBON	10K
R804	1-249-434-11	CARBON	27K 5% 1/4W	RV503	1-228-995-00	RES, ADJ, CARBON	22K
R805	1-249-441-11	CARBON	100K 5% 1/4W	RV504	1-226-702-00	RES, ADJ, METAL GLAZE	2.2K
R806	1-249-417-11	CARBON	1K 5% 1/4W	RV505	1-228-994-00	RES, ADJ, METAL GLAZE	10K
R807	1-249-435-11	CARBON	33K 5% 1/4W	RV506	1-228-991-00	RES, ADJ, CARBON	2.2K
R808	1-249-433-11	CARBON	22K 5% 1/4W	RV507	1-228-991-00	RES, ADJ, CARBON	2.2K
R809	1-249-431-11	CARBON	15K 5% 1/4W	RV801	1-228-991-00	RES, ADJ, CARBON	2.2K
R810	1-249-425-11	CARBON	4.7K 5% 1/4W	RV802	1-228-999-00	RES, ADJ, CARBON	470K
R811	1-249-421-11	CARBON	2.2K 5% 1/4W	RV803	1-228-999-00	RES, ADJ, CARBON	470K
R812	1-249-432-11	CARBON	18K 5% 1/4W	RV804	1-228-994-00	RES, ADJ, CARBON	10K
R813	1-247-883-00	CARBON	150K 5% 1/4W	RV805	1-228-995-00	RES, ADJ, CARBON	22K
R815	1-249-440-11	CARBON	82K 5% 1/4W	<SPARK GAP>			
R816	1-249-433-11	CARBON	22K 5% 1/4W	SG801	1-519-063-XX	DISCHARGING GAP	
R817	1-249-417-11	CARBON	1K 5% 1/4W	<TRANSFORMER>			
R819	1-249-439-11	CARBON	68K 5% 1/4W	T801	1-437-090-00	HDT	
R820	1-249-439-11	CARBON	68K 5% 1/4W	T804	1-413-059-00	TRANSFORMER, FERRITE (DFT)	
R822	1-249-429-11	CARBON	10K 5% 1/4W	*****			
R823	1-215-917-11	METAL OXIDE	1K 5% 3W F	*A-1347-031-A V BOARD, COMPLETE			
R824	1-249-417-11	CARBON	1K 5% 1/4W	*****			
R825	1-215-900-11	METAL OXIDE	22K 5% 2W F	*4-380-698-01 CASE (MAIN), SHIELD, A1			
R826	1-249-426-11	CARBON	5.6K 5% 1/4W	*4-380-699-01 CASE (UPPER LID), SHIELD, A1			
R827	1-249-429-11	CARBON	10K 5% 1/4W	*4-382-701-01 CASE (BOTTOM LID), SHIELD, A2			
R828	1-249-441-11	CARBON	100K 5% 1/4W	<CAPACITOR>			
R829	1-249-426-11	CARBON	5.6K 5% 1/4W				
R830	1-249-429-11	CARBON	10K 5% 1/4W				
R831	1-247-895-00	CARBON	470K 5% 1/4W				
R834	1-249-496-11	CARBON	100K 5% 1/2W				
R835	1-249-470-11	CARBON	0.47 5% 1/2W F				
R836	1-216-345-11	METAL OXIDE	0.47 5% 1W F				
R837	1-215-905-11	METAL OXIDE	10 5% 3W F				
R838	1-216-434-11	METAL OXIDE	1.8K 5% 1W F				
R839	1-247-761-11	CARBON	5.6K 5% 1/2W				
R841	1-215-920-11	METAL OXIDE	3.3K 5% 3W F				
R842	1-215-920-11	METAL OXIDE	3.3K 5% 3W F				
R843	1-215-917-11	METAL OXIDE	1K 5% 3W F				

V

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C02	1-124-120-11	ELECT 220MF	20% 16V	<COIL>			
C03	1-124-119-00	ELECT 330MF	20% 16V	L01	1-408-411-00	INDUCTOR 15UH	
C05	1-126-101-11	ELECT 100MF	20% 16V	L04	1-408-407-00	INDUCTOR 6.8UH	
C06	1-124-120-11	ELECT 220MF	20% 16V	L05	1-408-407-00	INDUCTOR 6.8UH	
C07	1-124-499-11	ELECT 1MF	20% 50V	L06	1-408-407-00	INDUCTOR 6.8UH	
C08	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	<IC LINK>			
C09	1-163-141-00	CERAMIC CHIP 0.001MF	10% 50V	PS01 $\Delta$ 1-532-679-91	LINK, IC	0.6A	
C10	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	PS02 $\Delta$ 1-532-727-91	LINK, IC	0.25A	
C11	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	<TRANSISTOR>			
C12	1-163-127-00	CERAMIC CHIP 270PF	5% 50V	Q01	8-729-904-27	TRANSISTOR 2SD1761-E	
C13	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	Q02	8-729-202-06	TRANSISTOR 2SC2873Y	
C14	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	Q03	8-729-900-59	TRANSISTOR DTC114EK	
C15	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	Q04	8-729-271-22	TRANSISTOR 2SC2712G	
C16	1-163-021-00	CERAMIC CHIP 0.01MF	10% 50V	Q05	8-729-202-06	TRANSISTOR 2SC2873Y	
C17	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	Q06	8-729-271-22	TRANSISTOR 2SC2712G	
C18	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	Q07	8-729-900-98	TRANSISTOR DTC143TK	
C19	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	Q09	8-729-800-68	TRANSISTOR 2SB815B6	
C20	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	Q10	8-729-800-68	TRANSISTOR 2SB815B6	
C21	1-163-833-00	CERAMIC CHIP 0.068MF	25V	Q11	8-729-800-68	TRANSISTOR 2SB815B6	
C24	1-126-101-11	ELECT 100MF	20% 16V	<RESISTOR>			
C25	1-124-477-11	ELECT 47MF	20% 16V	R01	1-218-326-11	METAL GLAZE 470	1/2W
C27	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	R02	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
C28	1-163-137-00	CERAMIC CHIP 680PF	10% 50V	R04	1-218-326-11	METAL GLAZE 470	1/2W
C29	1-124-927-11	ELECT 4.7MF	20% 50V	R05	1-216-025-00	METAL GLAZE 100	5% 1/10W
C51	1-163-038-00	CERAMIC CHIP 0.1MF	25V	R06	1-216-049-00	METAL GLAZE 1K	5% 1/10W
C52	1-163-038-00	CERAMIC CHIP 0.1MF	25V	R07	1-216-025-00	METAL GLAZE 100	5% 1/10W
C53	1-163-038-00	CERAMIC CHIP 0.1MF	25V	R08	1-216-037-00	METAL GLAZE 330	5% 1/10W
C54	1-163-038-00	CERAMIC CHIP 0.1MF	25V	R09	1-216-091-00	METAL GLAZE 56K	5% 1/10W
C55	1-163-038-00	CERAMIC CHIP 0.1MF	25V	R13	1-216-025-00	METAL GLAZE 100	5% 1/10W
C56	1-163-038-00	CERAMIC CHIP 0.1MF	25V	R14	1-216-025-00	METAL GLAZE 100	5% 1/10W
C57	1-163-141-00	CERAMIC CHIP 0.001MF	10% 50V	R15	1-216-121-00	METAL GLAZE 1M	5% 1/10W
C58	1-163-141-00	CERAMIC CHIP 0.001MF	10% 50V	R16	1-216-055-00	METAL GLAZE 1.8K	5% 1/10W
C59	1-163-141-00	CERAMIC CHIP 0.001MF	10% 50V	R17	1-216-049-00	METAL GLAZE 1K	5% 1/10W
<CONNECTOR>				R18	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
CNV01	*1-565-393-11	CONNECTOR, BOARD TO BOARD		R19	1-216-037-00	METAL GLAZE 330	5% 1/10W
CNV02	*1-565-393-11	CONNECTOR, BOARD TO BOARD		R20	1-216-043-00	METAL GLAZE 560	5% 1/10W
CNV03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		R27	1-216-013-00	METAL GLAZE 33	5% 1/10W
<TRIMMER>				R28	1-216-013-00	METAL GLAZE 33	5% 1/10W
CT01	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)		R29	1-216-013-00	METAL GLAZE 33	5% 1/10W
<DIODE>				R30	1-218-325-11	METAL GLAZE 120	1/4W
D01	8-719-400-47	DIODE MA3056M		R31	1-218-325-11	METAL GLAZE 120	1/4W
D02	8-719-400-95	DIODE MA3130L		R32	1-218-325-11	METAL GLAZE 120	1/4W
D03	8-719-914-43	DIODE DAN202K		R33	1-216-023-00	METAL GLAZE 82	5% 1/10W
D04	8-719-420-42	DIODE MA3036H		R34	1-216-049-00	METAL GLAZE 1K	5% 1/10W
D07	8-719-400-63	DIODE MA3068M		R37	1-216-025-00	METAL GLAZE 100	5% 1/10W
D08	8-719-400-63	DIODE MA3068M		R38	1-216-047-00	METAL GLAZE 820	5% 1/10W
D09	8-719-914-43	DIODE DAN202K		R40	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
D10	8-719-914-43	DIODE DAN202K		R41	1-216-041-00	METAL GLAZE 470	5% 1/10W
D11	8-719-914-44	DIODE DAP202K		R43	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
D12	8-719-914-44	DIODE DAP202K		R44	1-216-041-00	METAL GLAZE 470	5% 1/10W
<IC>				R45	1-216-049-00	METAL GLAZE 1K	5% 1/10W
IC1	8-759-972-41	IC MAB8461P-W136		R46	1-216-311-00	METAL GLAZE 6.8	5% 1/10W
IC2	8-759-972-96	IC SAA5231-V6		R51	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
IC3	8-759-946-85	IC SAA5243E		R52	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
IC4	8-759-230-68	IC TMM2063P-70		R53	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
				R54	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W
				R55	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
				R56	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R57	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	J1499	1-507-806-00	JACK	
R58	1-216-049-00	METAL GLAZE 1K 5%	1/10W			<RESISTOR>	
R59	1-216-056-00	METAL GLAZE 2K 5%	1/10W	R1498	1-247-708-11	CARBON 470 5%	1/4W
R60	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R1499	1-247-708-11	CARBON 470 5%	1/4W
R61	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W			*****	
R62	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W			*A-1388-080-A J1 BOARD, COMPLETE	
R63	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W			*****	
R64	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W			<CAPACITOR>	
R65	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	C202	1-124-902-00	ELECT 0.47MF	20% 50V
R66	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	C203	1-124-477-11	ELECT 47MF	20% 16V
R67	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	C204	1-124-902-00	ELECT 0.47MF	20% 50V
R68	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	C206	1-124-477-11	ELECT 47MF	20% 16V
R69	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	C208	1-102-110-00	CERAMIC 220PF	10% 50V
		<VARIABLE RESISTOR>		C213	1-126-233-11	ELECT 22MF	20% 50V
RV01	1-238-009-11	RES, ADJ, CARBON 220		C214	1-130-481-00	MYLAR 0.0068MF	10% 50V
		<CRYSTAL>		C216	1-102-110-00	CERAMIC 220PF	10% 50V
X01	1-567-162-21	OSCILLATOR, CRYSTAL		C217	1-124-902-00	ELECT 0.47MF	20% 50V
X02	1-567-495-21	OSCILLATOR, CRYSTAL		C218	1-136-157-00	MYLAR 0.022MF	10% 50V
X03	1-577-082-11	VIBRATOR, CERAMIC		C219	1-136-157-00	MYLAR 0.022MF	10% 50V
		*****		C220	1-130-477-00	MYLAR 0.0033MF	10% 50V
	*1-627-728-11	H BOARD	*****	C221	1-130-477-00	MYLAR 0.0033MF	10% 50V
				C222	1-136-157-00	MYLAR 0.022MF	10% 50V
	*4-390-706-01	HOLDER, LED		C223	1-136-157-00	MYLAR 0.022MF	10% 50V
		<CONNECTOR>		C224	1-136-153-00	MYLAR 0.01MF	10% 50V
CNH01	*1-564-523-11	PLUG, CONNECTOR 8P		C225	1-136-173-00	FILM 0.47MF	5% 50V
CNH02	*1-564-520-11	PLUG, CONNECTOR 5P		C226	1-136-173-00	FILM 0.47MF	5% 50V
		<DIODE>		C227	1-136-157-00	MYLAR 0.022MF	10% 50V
D1001	8-719-800-94	DIODE TLUR144		C228	1-136-159-00	MYLAR 0.033MF	10% 50V
D1002	8-719-812-41	DIODE TLR124		C229	1-136-155-00	MYLAR 0.015MF	10% 50V
D1003	8-719-812-41	DIODE TLR124		C230	1-136-155-00	MYLAR 0.015MF	10% 50V
D1004	8-719-812-41	DIODE TLR124		C231	1-124-902-00	ELECT 0.47MF	20% 50V
D1005	8-719-812-41	DIODE TLR124		C232	1-123-875-11	ELECT 10MF	20% 50V
		<IC>		C233	1-102-114-00	CERAMIC 470PF	10% 50V
IC1001	8-749-900-36	IC BX-1393		C234	1-102-114-00	CERAMIC 470PF	10% 50V
		<SWITCH>		C236	1-124-902-00	ELECT 0.47MF	20% 50V
S1001	1-554-937-11	SWITCH, KEY BOARD		C237	1-124-902-00	ELECT 0.47MF	20% 50V
S1002	1-554-937-11	SWITCH, KEY BOARD		C238	1-102-978-00	CERAMIC 220PF	5% 50V
S1003	1-554-937-11	SWITCH, KEY BOARD		C239	1-126-103-11	ELECT 470MF	20% 16V
S1004	1-554-937-11	SWITCH, KEY BOARD		C240	1-130-481-00	MYLAR 0.0068MF	10% 50V
S1005	1-554-937-11	SWITCH, KEY BOARD		C1401	1-123-875-11	ELECT 10MF	20% 50V
		*****		C1402	1-126-103-11	ELECT 470MF	20% 16V
	*1-627-736-11	J2 BOARD	*****	C1403	1-102-114-00	CERAMIC 470PF	10% 50V
				C1404	1-124-902-00	ELECT 0.47MF	20% 50V
		<CONNECTOR>		C1405	1-101-003-00	CERAMIC 0.0047MF	50V
CNJ23	*1-564-523-11	PLUG, CONNECTOR 8P		C1406	1-124-902-00	ELECT 0.47MF	20% 50V
		<JACK>		C1407	1-123-875-11	ELECT 10MF	20% 50V
				C1408	1-126-101-11	ELECT 100MF	20% 16V
				C1409	1-126-233-11	ELECT 22MF	20% 50V
				C1412	1-124-477-11	ELECT 47MF	20% 16V
				C1413	1-124-477-11	ELECT 47MF	20% 16V
				C1414	1-123-875-11	ELECT 10MF	20% 50V
				C1415	1-124-902-00	ELECT 0.47MF	20% 50V
				C1416	1-124-902-00	ELECT 0.47MF	20% 50V
				C1417	1-124-477-11	ELECT 47MF	20% 16V
				C1418	1-102-114-00	CERAMIC 470PF	10% 50V
				C1419	1-102-114-00	CERAMIC 470PF	10% 50V
				C1421	1-124-477-11	ELECT 47MF	20% 16V
				C1423	1-136-157-00	MYLAR 0.022MF	10% 50V

J1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1424	1-136-157-00	MYLAR 0.022MF 10% 50V		R207	1-249-423-11	CARBON 3.3K 5% 1/4W	
C1425	1-124-902-00	ELECT 0.47MF 20% 50V		R208	1-249-431-11	CARBON 15K 5% 1/4W	
C1426	1-124-902-00	ELECT 0.47MF 20% 50V		R209	1-249-433-11	CARBON 22K 5% 1/4W	
C1427	1-101-003-00	CERAMIC 0.0047MF 50V		R210	1-249-431-11	CARBON 15K 5% 1/4W	
C1428	1-101-003-00	CERAMIC 0.0047MF 50V		R211	1-249-441-11	CARBON 100K 5% 1/4W	
C1429	1-102-125-00	CERAMIC 0.0047MF 10% 50V		R212	1-249-433-11	CARBON 22K 5% 1/4W	
C1430	1-102-114-00	CERAMIC 470PF 10% 50V		R213	1-249-431-11	CARBON 15K 5% 1/4W	
C1431	1-124-902-00	ELECT 0.47MF 20% 50V		R214	1-249-409-11	CARBON 220 5% 1/4W	
C1432	1-124-902-00	ELECT 0.47MF 20% 50V		R215	1-249-433-11	CARBON 22K 5% 1/4W	
C1433	1-126-101-11	ELECT 100MF 20% 16V		R216	1-249-433-11	CARBON 22K 5% 1/4W	
C1450	1-123-875-11	ELECT 10MF 20% 50V		R217	1-249-431-11	CARBON 15K 5% 1/4W	
<CONNECTOR>				R218	1-249-409-11	CARBON 220 5% 1/4W	
CNJ01	1-561-534-41	SOCKET 21P		R219	1-249-429-11	CARBON 10K 5% 1/4W	
CNJ02	1-561-534-41	SOCKET 21P		R220	1-249-425-11	CARBON 4.7K 5% 1/4W	
CNJ03	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P		R221	1-249-417-11	CARBON 1K 5% 1/4W	
CNJ04	1-536-996-11	TERMINAL BOARD, INPUT/OUTPUT		R222	1-249-417-11	CARBON 1K 5% 1/4W	
CNJ21	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P		R223	1-249-413-11	CARBON 470 5% 1/4W	
CNJ22	*1-564-517-11	PLUG, CONNECTOR 2P		R224	1-249-413-11	CARBON 470 5% 1/4W	
<DIODE>				R225	1-249-393-11	CARBON 10 5% 1/4W	F
D201	8-719-110-14	DIODE RD9.1ES-B3		R226	1-249-413-11	CARBON 470 5% 1/4W	
D202	8-719-110-14	DIODE RD9.1ES-B3		R227	1-249-417-11	CARBON 1K 5% 1/4W	
D1401	8-719-110-04	DIODE RD7.5ES-B3		R228	1-249-417-11	CARBON 1K 5% 1/4W	
D1403	8-719-110-04	DIODE RD7.5ES-B3		R229	1-249-437-11	CARBON 47K 5% 1/4W	
D1404	8-719-110-04	DIODE RD7.5ES-B3		R231	1-249-409-11	CARBON 220 5% 1/4W	
D1405	8-719-110-04	DIODE RD7.5ES-B3		R232	1-249-409-11	CARBON 220 5% 1/4W	
D1406	8-719-110-04	DIODE RD7.5ES-B3		R1401	1-247-804-11	CARBON 75 5% 1/4W	
D1407	8-719-110-04	DIODE RD7.5ES-B3		R1402	1-247-804-11	CARBON 75 5% 1/4W	
D1408	8-719-110-14	DIODE RD9.1ES-B3		R1403	1-249-437-11	CARBON 47K 5% 1/4W	
D1409	8-719-110-04	DIODE RD7.5ES-B3		R1404	1-249-413-11	CARBON 470 5% 1/4W	
D1418	8-719-110-04	DIODE RD7.5ES-B3		R1405	1-249-429-11	CARBON 10K 5% 1/4W	
D1419	8-719-110-04	DIODE RD7.5ES-B3		R1406	1-249-427-11	CARBON 6.8K 5% 1/4W	
D1421	8-719-110-04	DIODE RD7.5ES-B3		R1407	1-247-895-00	CARBON 470K 5% 1/4W	
D1422	8-719-110-04	DIODE RD7.5ES-B3		R1408	1-249-434-11	CARBON 27K 5% 1/4W	
D1423	8-719-110-04	DIODE RD7.5ES-B3		R1409	1-249-413-11	CARBON 470 5% 1/4W	
D1425	8-719-110-04	DIODE RD7.5ES-B3		R1410	1-249-434-11	CARBON 27K 5% 1/4W	
<IC>				R1411	1-249-413-11	CARBON 470 5% 1/4W	
IC201	8-759-013-17	IC TDA6200		R1412	1-249-437-11	CARBON 47K 5% 1/4W	
IC1401	8-752-032-27	IC CXA1114P		R1413	1-247-895-00	CARBON 470K 5% 1/4W	
IC1402	8-759-946-32	IC TEA2014A		R1414	1-249-437-11	CARBON 47K 5% 1/4W	
<COIL>				R1415	1-249-434-11	CARBON 27K 5% 1/4W	
L1401	1-459-407-00	COIL, FERRITE CHOKE		R1416	1-249-434-11	CARBON 27K 5% 1/4W	
L1402	1-459-407-00	COIL, FERRITE CHOKE		R1417	1-247-804-11	CARBON 75 5% 1/4W	
<TRANSISTOR>				R1418	1-247-738-11	CARBON 82 5% 1/2W	F
Q201	8-729-117-54	TRANSISTOR 2SA1175		R1419	1-249-409-11	CARBON 220 5% 1/4W	
Q202	8-729-117-54	TRANSISTOR 2SA1175		R1420	1-249-409-11	CARBON 220 5% 1/4W	
Q1401	8-729-117-54	TRANSISTOR 2SA1175		R1421	1-249-409-11	CARBON 220 5% 1/4W	
Q1402	8-729-117-54	TRANSISTOR 2SA1175		R1422	1-249-409-11	CARBON 220 5% 1/4W	
Q1405	8-729-117-54	TRANSISTOR 2SA1175		R1423	1-249-434-11	CARBON 27K 5% 1/4W	
<RESISTOR>				R1424	1-249-434-11	CARBON 27K 5% 1/4W	
R201	1-249-437-11	CARBON 47K 5% 1/4W		R1425	1-249-409-11	CARBON 220 5% 1/4W	
R202	1-249-425-11	CARBON 4.7K 5% 1/4W		R1426	1-249-416-11	CARBON 820 5% 1/4W	
R204	1-249-435-11	CARBON 33K 5% 1/4W		R1427	1-249-416-11	CARBON 820 5% 1/4W	
R205	1-249-435-11	CARBON 33K 5% 1/4W		R1428	1-247-895-00	CARBON 470K 5% 1/4W	
R206	1-249-423-11	CARBON 3.3K 5% 1/4W		R1429	1-247-895-00	CARBON 470K 5% 1/4W	
				R1430	1-247-804-11	CARBON 75 5% 1/4W	
				R1433	1-249-405-11	CARBON 100 5% 1/4W	
				R1434	1-249-393-11	CARBON 10 5% 1/4W	F
				R1437	1-249-429-11	CARBON 10K 5% 1/4W	
				R1438	1-249-427-11	CARBON 6.8K 5% 1/4W	
				R1440	1-249-417-11	CARBON 1K 5% 1/4W	
				R1442	1-249-437-11	CARBON 47K 5% 1/4W	
				R1443	1-249-437-11	CARBON 47K 5% 1/4W	
				R1445	1-249-440-11	CARBON 82K 5% 1/4W	
				R1447	1-249-409-11	CARBON 220 5% 1/4W	

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The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1448	1-249-409-11	CARBON 220 5% 1/4W		<MODULE>			
R1449	1-247-804-11	CARBON 75 5% 1/4W		1C601	1-236-237-11	PQWER MODULE (DM-38)	
R1450	1-247-804-11	CARBON 75 5% 1/4W		<COIL>			
R1451	1-247-804-11	CARBON 75 5% 1/4W		L603	1-408-300-00	INDUCTOR MICRO 6.8UH	
R1455	1-247-804-11	CARBON 75 5% 1/4W		L604	1-421-329-00	COIL, CHOKE	
R1456	1-249-409-11	CARBON 220 5% 1/4W		L605	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
R1457	1-249-409-11	CARBON 220 5% 1/4W		L606	1-407-365-00	COIL, CHOKE	
R1459	1-249-413-11	CARBON 470 5% 1/4W		L607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
*****							
	1-413-380-11	G BOARD (ZD-109)		L609	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
		*****		L610	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
<CAPACITOR>							
C601	1-136-721-21	METALIZED FILM 1.5MF 10% 400V		L613	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
C602	1-136-618-11	FILM 0.047MF 5% 1.25KV		L615	1-459-155-00	COIL (WITH CORE) 45UH	
C603	1-136-618-11	FILM 0.047MF 5% 1.25KV		L616	1-459-155-00	COIL (WITH CORE) 45UH	
C604	1-130-325-51	PP FILM 0.15MF 5% 100V		L617	1-459-155-00	COIL (WITH CORE) 45UH	
C605	1-130-325-51	PP FILM 0.15MF 5% 100V		L618	1-459-155-00	COIL (WITH CORE) 45UH	
<TRANSISTOR>							
C606	1-164-143-91	CERAMIC 1000PF 10% 1KV		Q601	8-729-905-73	TRANSISTOR 2SC4056R	
C607	1-164-143-91	CERAMIC 1000PF 10% 1KV		Q602	8-729-905-73	TRANSISTOR 2SC4056R	
C608	1-164-143-91	CERAMIC 1000PF 10% 1KV		Q603	8-729-178-54	TRANSISTOR 2SC2785	
C609	1-164-144-91	CERAMIC 1500PF 10% 1KV		Q604	8-729-178-54	TRANSISTOR 2SC2785	
C610	1-164-143-91	CERAMIC 1000PF 10% 1KV		<RESISTOR>			
C611	1-102-038-00	CERAMIC 1000PF 500V		R601	1-215-904-11	METAL OXIDE FILM 100K 5% 2W	
C612	1-108-843-11	PF TEREPHTHALATE 0.033MF 10% 50V		R602	1-215-904-11	METAL OXIDE FILM 100K 5% 2W	
C613	1-124-477-11	ELECT 47MF 20% 16V		R605	1-207-451-00	RES, WIRE 10 10% 1/2W	
C614	1-126-176-11	ELECT 220MF 20% 6.3V		R606	1-207-451-00	RES, WIRE 10 10% 1/2W	
C615	1-123-380-00	ELECT 1MF 20% 50V		R607	1-216-370-11	METAL OXIDE FILM 1.2 5% 2W	
C616	1-124-557-11	ELECT 1000MF 20% 25V		R608	1-216-370-11	METAL OXIDE FILM 1.2 5% 2W	
C618	1-124-439-51	ELECT 2700MF 20% 25V		R609	1-249-405-11	CARBON(SMALL) 100 5% 1/4W	
C619	1-124-557-11	ELECT 1000MF 20% 25V		R610	1-249-405-11	CARBON(SMALL) 100 5% 1/4W	
C620	1-124-568-00	ELECT 4700MF 20% 10V		R611	1-249-417-11	CARBON 1K 5% 1/4W	
C621	1-124-347-00	ELECT 100MF 20% 160V		R612	1-249-382-11	CARBON(SMALL) 1.2 5% 1/4W	
C622	1-108-843-11	PF TEREPHTHALATE 0.033MF 10% 50V		R613	1-249-398-11	CARBON(SMALL) 27 5% 1/4W	
C623	1-162-115-00	CERAMIC 330PF 10% 2KV		R614	1-249-405-11	CARBON(SMALL) 100 5% 1/4W	
C624	1-124-471-00	ELECT 1000MF 20% 6.3V		R615	1-216-363-00	METAL OXIDE FILM 0.33 5% 2W	
<DIODE>							
D601	8-719-500-69	DIODE S3V10SS		R616	1-216-363-00	METAL OXIDE FILM 0.33 5% 2W	
D602	8-719-500-69	DIODE S3V10SS		R617	1-216-343-00	RES, WIRE 33 10% 1/2W	
D603	8-719-500-26	DIODE D5KD20H		R618	1-207-451-00	RES, WIRE 10 10% 1/2W	
D605	8-719-510-13	DIODE D10SC4MR		R619	1-249-417-11	CARBON 1K 5% 1/4W	
D606	8-719-510-12	DIODE D10SC4M		R620	1-249-407-11	CARBON(SMALL) 150 5% 1/4W	
D607	8-719-300-33	DIODE RU2M		R621	1-249-405-11	CARBON(SMALL) 100 5% 1/4W	
D608	8-719-300-33	DIODE RU2M		<TRANSFORMER>			
D609	8-719-500-67	DIODE D5KC40H		T601	1-424-023-11	TRANSFORMER, LINE FILTER	
D610	8-719-911-19	DIODE 1SS119		T602 $\Delta$	1-424-147-11	TRANSFORMER, POWER REGULATION	
D611	8-719-911-19	DIODE 1SS119		T603 $\Delta$	1-424-169-11	TRANSFORMER, POWER INSULATED	
D612	8-719-911-19	DIODE 1SS119		*****			
D613	8-719-911-19	DIODE 1SS119		MISCELLANEOUS			
D614	8-719-911-19	DIODE 1SS119		*****			
D615	8-719-981-00	DIODE ERB81-004		$\Delta$ 1-413-380-11	REGULATOR, SWITCHING (ZD-109)		
D616	8-719-911-55	DIODE U05G		$\Delta$ 1-230-940-31	RESISTOR ASSY, HIGH-VOLTAGE		
<CONNECTOR>							
G1	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		$\Delta$ 1-238-368-11	RESISTOR ASSY, HIGH-VOLTAGE		
G2	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P		T805 $\Delta$ 1-439-443-11	TRANSFORMER ASSY, FLYBACK		
G3	*1-564-507-11	PLUG, CONNECTOR 4P		$\Delta$ 1-452-509-31	NECK ASSY, PICTURE TUBE (NA-308)		
G4	*1-564-506-11	PLUG, CONNECTOR 3P		$\Delta$ 1-451-333-11	DEFLECTION YOKE (SY-191B)		
				1-452-032-00	MAGNET, DISK; 10MM $\phi$		

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
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	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM $\phi$	
	$\Delta$ 1-574-299-11	CORD, POWER (WITH CONNECTOR)	
L901	$\Delta$ 1-426-398-11	COIL, DEMAGNETIZATION	
V901	$\Delta$ 8-733-821-05	PICTURE TUBE (A68JYK10X)	

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ACCESSORIES AND PACKING MATERIALS  
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PART NO.	DESCRIPTION	REMARK
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A-1470-859-A	COMMANDER ASSY (RM-681)	
1-574-071-11	CORD (WITH PLUG)	
3-786-575-11	MANUAL, INSTRUCTION	
*4-380-432-01	BAG, PROTECTION	
*4-390-743-01	CUSHION (UPPER) (ASSY)	
*4-390-744-01	CUSHION (LOWER) (ASSY)	
*4-390-749-01	INDIVIDUAL CARTON	